Set for ORAL ARGUMENT on DECEMBER 6, 2024

No. 24-1120 (and consolidated cases)

IN THE UNITED STATES COURT OF APPEALS FOR THE DISTRICT OF COLUMBIA CIRCUIT

STATE OF WEST VIRGINIA, *et al.*,
Petitioners,

v.

ENVIRONMENTAL PROTECTION AGENCY, *et al.*,
Respondents.

On Petitions for Review of Final Agency Action of the United States Environmental Protection Agency 89 Fed. Reg. 39,798 (May 9, 2024)

REPLY BRIEF OF PETITIONERS

Theodore E. Rokita
Attorney General
James A. Barta
Solicitor General

OFFICE OF THE
ATTORNEY GENERAL
OF INDIANA
302 W. Washington St.
Indianapolis, IN 46204
(317) 232-0709

Counsel for Petitioner
State of Indiana

Patrick Morrisey
Attorney General
Michael R. Williams
Solicitor General

OFFICE OF THE WEST VIRGINIA
ATTORNEY GENERAL
1900 Kanawha Blvd. E
State Capitol Bldg. 1, Rm. 26-E
Charleston, WV 25305
(304) 558-2021

Counsel for Petitioner
State of West Virginia

Additional counsel listed on following pages

Allison D. Wood
Makram B. Jaber
Aaron M. Flynn
McGuireWoods LLP
888 16th Street, NW, Suite 500
Black Lives Matter Plaza
Washington, DC 20006
(202) 857-2420

Paul D. Clement
C. Harker Rhodes IV
Clement & Murphy, PLLC
706 Duke Street
Alexandria, VA 22314
(202) 742-8900

Counsel for Petitioner Electric Generators for a Sensible Transition

Steve Marshall
Attorney General
Edmund G. LaCour Jr.
Solicitor General

Office of the Attorney General
State of Alabama
501 Washington Ave.
P.O. Box 300152
Montgomery, AL 36130-0152
(334) 242-7300

Counsel for Petitioner State of Alabama

Scott A. Keller
Steven P. Lehotsky
Michael B. Schon
Joshua P. Morrow
Jacob B. Richards
Lehotsky Keller Cohn LLP
200 Massachusetts Ave., NW
Suite 700
Washington, DC 20001
(512) 693-8350

Mithun Mansinghani
Lehotsky Keller Cohn LLP
629 W. Main St.
Oklahoma City, OK 73102

Counsel for Petitioner National Rural Electric Cooperative Association

Treg Taylor
Attorney General
Garrison Todd
Assistant Attorney General

Alaska Department of Law
1031 W. 4th Ave., Suite 200
Anchorage, AK 99501
(907) 269-5100

Counsel for Petitioner State of Alaska

Thomas A. Lorenzen
Amanda Shafer Berman
Elizabeth B. Dawson
CROWELL & MORING LLP
1001 Pennsylvania Ave., NW
Washington, DC 20004
(202) 624-2500

Counsel for Petitioner Edison Electric Institute

Tim Griffin
Attorney General
Nicholas J. Bronni
Solicitor General
Dylan Jacobs
Deputy Solicitor General

OFFICE OF THE ARKANSAS ATTORNEY GENERAL
323 Center Street, Suite 200
Little Rock, AR 72201
(501) 682-2007

Counsel for Petitioner State of Arkansas

Megan H. Berge
BAKER BOTTS L.L.P.
700 K Street, NW
Washington, DC 20001
(415) 291-6233
(202) 639-7733

J. Mark Little
BAKER BOTTS L.L.P.
910 Louisiana Street
Houston, TX 77002
(713) 229-1489

Counsel for Petitioners Idaho Power Company; Oklahoma Gas and Electric Company; Montana-Dakota Utilities Co.; and Rainbow Energy Center, LLC

Ashley Moody
Attorney General
Henry C. Whitaker
Solicitor General
James H. Percival
Chief of Staff

OFFICE OF THE ATTORNEY GENERAL
The Capital, Pl-01
Tallahassee, FL 32399-1050
(850) 414-3300

Counsel for Petitioner State of Florida

David M. Flannery
Kathy G. Beckett
Keeleigh S. Huffman
STEPTOE & JOHNSON PLLC
707 Virginia Street, East
P.O. Box 1588
Charleston, WV 25326
(304) 353-8000

Edward L. Kropp
STEPTOE & JOHNSON PLLC
P.O. Box 36425
Indianapolis, IN 46236
(317) 946-9882

Counsel for Petitioners Midwest Ozone Group and Appalachian Region Independent Power Producers

Christopher M. Carr
Attorney General
Stephen J. Petrany
Solicitor General

OFFICE OF THE ATTORNEY GENERAL OF GEORGIA
40 Capital Square, SW
Atlanta, GA 30334
(404) 458-3408

Counsel for Petitioner State of Georgia

Misha Tseytlin
TROUTMAN PEPPER HAMILTON SANDERS LLP
227 W. Monroe Street, Suite 3900
Chicago, IL 60606
(608) 999-1240

Carroll Wade McGuffey III
Melissa Horne
TROUTMAN PEPPER HAMILTON SANDERS LLP
600 Peachtree St. N.E.
Suite 3000
Atlanta, GA 30308
(404) 885-3698

Counsel for Petitioners National Mining Association and America's Power

Raúl R. Labrador
Attorney General
Alan M. Hurst
Solicitor General

OFFICE OF THE IDAHO ATTORNEY GENERAL
P.O. Box 83720
Boise, ID 83720-0010
(208) 334-2400

Counsel for Petitioner State of Idaho

Eugene M. Trisko
Law Offices of Eugene M. Trisko
P.O. Box 330133
Atlantic Beach, FL 32233
(301) 639-5238

Counsel for Petitioners United Mine Workers of America, AFL-CIO; International Brotherhood of Electrical Workers, AFL-CIO; and International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers, AFL-CIO

Kris W. Kobach
Attorney General
Anthony J. Powell
Solicitor General

OFFICE OF THE KANSAS ATTORNEY GENERAL
120 SW 10th Avenue, 2nd Floor
Topeka, KS 66612
(785) 368-8539

Counsel for Petitioner State of Kansas

Charles T. Wehland
JONES DAY
110 North Wacker Drive
Suite 4800
Chicago, IL 60601-1692
(312) 269-4388

Yaakov Roth
Brinton Lucas
S. Matthew Krsacok
JONES DAY
51 Louisiana Avenue, NW
Washington, DC 20001
(202) 879-7658

Jeffery D. Ubersax
KUSHNER & HAMED CO., LPA
1375 East Ninth Street
Suite 1390
Cleveland, OH 44114
(216) 696-6700

Counsel for Petitioner NACCO Natural Resources Corporation

Brenna Bird
Attorney General
Eric H. Wessan
Solicitor General

OFFICE OF THE ATTORNEY GENERAL OF IOWA
1305 E. Walnut Street
Des Moines, IA 50319
(515) 823-9117

Counsel for Petitioner State of Iowa

Martin T. Booher
Joshua T. Wilson
Baker & Hostetler LLP
2000 Key Tower
127 Public Square
Cleveland, OH 44114

Mark W. DeLaquil
Baker & Hostetler LLP
1050 Connecticut Ave., NW
Suite 1100
Washington, DC 20036
(202) 861-1527

Counsel for Petitioners, Westmoreland Mining Holdings LLC; Westmoreland Mining LLC; and Westmoreland Rosebud Mining LLC

Russell Coleman
Attorney General
Matthew F. Kuhn
Solicitor General
Jacob M. Abrahamson
Counsel for Special Litigation

OFFICE OF THE KENTUCKY ATTORNEY GENERAL
700 Capital Avenue, Suite 118
Frankfort, KY 40601
(502) 696-5300

Counsel for Petitioner Commonwealth of Kentucky

Liz Murrill
Attorney General
J. Benjamin Aguiñaga
Solicitor General
Tracy Short
Assistant Attorney General

LOUISIANA DEPARTMENT OF JUSTICE
1885 N. Third Street
Baton Rouge, LA 70804
(225) 326-6766

Counsel for Petitioner State of Louisiana

Lynn Fitch
Attorney General
Justin L. Matheny
Deputy Solicitor General

OFFICE OF THE MISSISSIPPI ATTORNEY GENERAL
P.O. Box 220
Jackson, MS 39205-0220
(601) 359-3825

Counsel for Petitioner State of Mississippi

Andrew Bailey
Attorney General
Joshua M. Divine
Solicitor General

MISSOURI ATTORNEY GENERAL'S OFFICE
P.O. Box 899
Jefferson City, MO 65102
(573) 751-1800

Counsel for Petitioner State of Missouri

Austin Knudsen
Attorney General
Christian B. Corrigan
Solicitor General
Peter M. Torstensen, Jr.
Deputy Solicitor General

MONTANA DEPARTMENT OF JUSTICE
215 North Sanders
P.O. Box 201401
Helena, MT 59620-1401
(406) 444-2026

Counsel for Petitioner State of Montana

Michael T. Hilgers
Attorney General
Zachary A. Viglianco
Deputy Solicitor General

OFFICE OF THE ATTORNEY GENERAL OF NEBRASKA
2115 State Capitol
Lincoln, NE 68509
(531) 739-7645

Counsel for Petitioner State of Nebraska

John Formella
Attorney General
Mark W. Dell'Orfano
Assistant Attorney General

NEW HAMPSHIRE DEPARTMENT OF JUSTICE
33 Capitol Street
Concord, NH 03301
(603) 271-3643

Counsel for Petitioner State of New Hampshire

Drew H. Wrigley
Attorney General
Philip Axt
Solicitor General

OFFICE OF ATTORNEY GENERAL OF NORTH DAKOTA
600 E. Boulevard Ave., Dept. 125
Bismarck, ND 58505
(701) 328-2210

Counsel for Petitioner State of North Dakota

Dave Yost
Attorney General
T. Elliott Gaiser
Solicitor General
Mathura J. Sridharan
Zachery P. Keller
Deputy Solicitors General
John K. McManus
Assistant Attorney General

OHIO ATTORNEY GENERAL'S OFFICE
30 East Broad St., 17th Floor
Columbus, OH 43215
(614) 466-8980

Counsel for Petitioner State of Ohio

Gentner Drummond
Attorney General
Garry M. Gaskins, II
Solicitor General
Jennifer L. Lewis
Deputy Attorney General

OFFICE OF THE ATTORNEY GENERAL OF OKLAHOMA
313 NE Twenty-First St.
Oklahoma City, OK 73105
(405) 521-3921

Counsel for Petitioner State of Oklahoma

Alan Wilson
Attorney General
Robert D. Cook
Solicitor General
J. Emory Smith, Jr.
Deputy Solicitor General
Thomas T. Hydrick
Joseph D. Spate
Assistant Deputy Solicitors General

OFFICE OF THE ATTORNEY GENERAL OF SOUTH CAROLINA
1000 Assembly Street
Columbia, SC 29201
(803) 734-3371

Counsel for Petitioner State of South Carolina

Marty J. Jackley
Attorney General
Steven Blair
Deputy Attorney General

SOUTH DAKOTA ATTORNEY GENERAL'S OFFICE
1302 E. Highway 14, Suite 1
Pierre, SD 57501
(605) 773-3215

Counsel for Petitioner State of South Dakota

Ken Paxton
Attorney General
Brent Webster
First Assistant Attorney General
Ralph Molina, *Deputy First Assistant Attorney General*
James Lloyd
Deputy Attorney General for Civil Litigation
Kellie E. Billings-Ray *Chief, Environmental Protection Division*
Wesley S. Williams
Ian Lancaster
Assistant Attorneys General
OFFICE OF THE ATTORNEY GENERAL OF TEXAS
ENVIRONMENTAL PROTECTION DIVISION
P.O. Box 12548, MC-066
Austin, TX 78711-2548
(512) 463-2012

Counsel for Petitioner State of Texas

Jonathan Skrmetti
Attorney General and Reporter
J. Matthew Rice
Solicitor General
Whitney Hermandorfer
Director of Strategic Litigation

OFFICE OF THE ATTORNEY GENERAL AND REPORTER OF TENNESSEE
P.O. Box 20207
Nashville, TN 37202-0207
(615) 741-7403

Counsel for Petitioner State of Tennessee

Sean Reyes
Attorney General
Stanford E. Purser
Solicitor General

OFFICE OF THE UTAH ATTORNEY GENERAL
160 E. 300 S., 5th Floor
Salt Lake City, UT 84111
(385) 382-4334

Counsel for Petitioner State of Utah

Jason Miyares
Attorney General
Erika L. Maley
Solicitor General
Kevin M. Gallagher
Principal Deputy Solicitor General
Brendan T. Chestnut
Deputy Solicitor General

VIRGINIA ATTORNEY GENERAL'S OFFICE
202 North 9th Street
Richmond, VA 23219
(804) 786-2071

Counsel for Petitioner Commonwealth of Virginia

Bridget Hill
Attorney General
D. David DeWald
Deputy Attorney General

OFFICE OF THE ATTORNEY GENERAL OF WYOMING
109 State Capitol
Cheyenne, WY 82002
(307) 777-7895

Counsel for Petitioner State of Wyoming

TABLE OF CONTENTS

TABLE OF AUTHORITIES

Page(s)

Cases

Statutes

Other Authorities

GLOSSARY OF TERMS

Act	Clean Air Act
ARIPPA	Appalachian Region Independent Power Producers Association
BSER	Best System of Emission Reduction
CCS	Carbon Capture and Sequestration/Storage
CO_2	Carbon Dioxide
DOE	U.S. Department of Energy
EPA	U.S. Environmental Protection Agency
FERC	Federal Energy Regulatory Commission
GW	Gigawatt
lb/CO_2/MWh	Pounds of CO_2 per Megawatt Hour
MW	Megawatt
RTC	Response to Comments

INTRODUCTION & SUMMARY OF ARGUMENT

EPA's arguments only underscore that the Rule is unlawful and should be vacated.

EPA shifts justifications for its 90% CCS BSER. After espousing a forward-looking approach in the Rule, EPA now insists that it "did not rely on future technological development" but instead "based its ['adequately demonstrated' and 'achievable'] determination[s] on evidence concerning the availability of CCS technology *now*." Resp. 26, 28. By abandoning the Rule's unlawful mandate-it-and-they-will-come rationale, EPA admits that it needs to identify demonstrations that have already occurred. There are none.

On *today's* extant evidence, EPA cannot defend its 90% CCS BSER as having "been adequately demonstrated" and its associated standard of performance as "achievable." EPA cannot cite a single example of a power-generating facility *ever* achieving—or even coming close to—the consistent, facility-wide 90% CCS BSER on which the Rule is premised. Instead, EPA offers a handful of examples showing sporadic 90% capture or 90% capture from a partial emissions stream. That is not adequate

demonstration. EPA cannot lawfully mandate Petitioners to do what even its best examples have not even approached.

And that is just the beginning. EPA glosses over serious issues with the Rule's treatment of the transport and storage aspects of CCS. It has no good answers for the Rule's blinkered cost analysis or its failure to fully address reliability and coal-refuse concerns. It struggles to explain how the Rule's alternative co-firing BSER—which forces a coal plant to become a hybrid gas plant—is not impermissible generation shifting. It denies the reality that the Rule implicates a major question in every sense. And it insists the Rule's unlawful hamstringing of the State's statutorily granted discretion is permissible.

Altogether, the Rule is unlawful many times over. It violates fundamental principles of administrative law and oversteps the bounds of EPA's authority under the Clean Air Act. This Court should vacate it.[1]

[1] Consistent with the opening brief, Br. 21 n.4, Petitioners Edison Electric Institute, Electric Generators for a Sensible Transition, Idaho Power Company, Montana-Dakota Utilities Co., Oklahoma Gas and Electric Company, and the Westmoreland Petitioners do not join Section V. Petitioner Edison Electric Institute joins Section I.A and takes no position on the remaining arguments.

ARGUMENT

I. EPA's 90%-annual capture, transport, and storage system is unlawful.

A. EPA's BSER and standard of performance are not "adequately demonstrated" or currently "achievable."

1. EPA misinterprets the Clean Air Act.

EPA shifts from the forward-looking rationale used in the Rule, *see* Br. 26-27, 39-41, and attempts to avoid the key statutory interpretation issue here by asserting it agreed all along with Petitioners' reading of the Act. EPA now insists it "based its determination on evidence concerning the availability of CCS technology *now*," not "future technological development." Resp. 26, 28. But "an agency's [action must] be upheld, if at all, on the same basis articulated . . . by the agency itself." *Burlington Truck Lines, Inc. v. United States*, 371 U.S. 156, 168 (1962) (citing *SEC v. Chenery Corp.*, 332 U.S. 194, 196 (1947)). EPA's *post hoc* rationale alone requires vacatur. *Id.* at 168.

Regardless, EPA's *post-hoc* rationalizing does not help the agency, as it now must justify its BSER without relying on projections. But EPA identifies no plant that has achieved the Rule's annual 90% CCS standard. EPA cobbles together a few insufficient examples: one that almost got to 90% capture for a grand total of three days: (Boundary

Dam), and others that captured only small portions of the facility's emissions. Resp. 31-38. None would meet the Rule's stringent and continuous requirements.

EPA responds by accusing Petitioners of "impos[ing] extra-statutory requirements." Resp. 38. EPA protests that the terms "consistent," "annual," and "facility-wide" "appear nowhere in the statute." Resp. 39. But *EPA*, not Petitioners, established those requirements—continuous, annual, facility-wide, 90% CCS—*in the Rule*.

Make no mistake: EPA's selected BSER is *continuous, facility-wide* capture of 90% of all CO_2 emissions on an annual basis. CI8244 (89 Fed. Reg. at 39,798, 39,801-02, 39,974, 40,016). Petitioners are not adding words to the Act. They are measuring EPA's examples by the same bar that the Rule sets for all existing coal-fired and new gas-fired power plants. If Petitioners met or even exceeded the performance of EPA's best example (Boundary Dam), they would still not be in compliance. It strains credulity to suggest that—without relying on *any* projection—90% CCS "has been adequately demonstrated" and yields a performance standard that is "achievable" when EPA has identified no plant anywhere that comes close to compliance with the Rule.

Nor do this Court's precedents permit EPA's approach. EPA's argument hinges on a single line from this Court's decision in *Essex*, which said in passing that an "adequately demonstrated" system "does not require that a . . . plant be currently in operation which can at all times and under all circumstances meet the standards." *Essex Chem. Corp. v. Ruckelshaus*, 486 F.2d 427, 433 (D.C. Cir. 1973). But *Essex* did not (and under the Act, could not) uphold a regulation despite the regulation's BSER never having been demonstrated. Br. 39 & n.8. Rather, *Essex* upheld a BSER for new sources based on the system's demonstrated ability to meet the proposed standard on multiple occasions and to nearly meet it on many more, at an existing source. 486 F.2d at 436-37; *see* also 37 Fed. Reg. 5,767, 5,770 (Mar. 21, 1972) (relying on performance of plants using the proposed system); *see also Sierra Club v. Costle*, 657 F.2d 298, 356, 367-68 (D.C. Cir. 1981) (holding a 90% SO_2 standard achievable because EPA demonstrated 86% removal from one method and 4% from an additional proven method). That is not present here.

Unlike in *Essex*, Petitioners are not disputing examples that meet or nearly meet the Rule's standard most of the time. *Contra* NGO Int. 7-

8. Instead, *not one* of EPA's examples has come close to meeting the Rule's standard. EPA's closest example, Boundary Dam, achieved 89.7% capture during a fleeting, three-day test almost a decade ago. It then spent the next decade unable to consistently even approach that level of performance. Br. 46. That is the antithesis of a "proven track record." *West Virginia v. EPA*, 597 U.S. 697, 759 (2022) (Kagan, J., dissenting). It underscores that this BSER is precisely the type of projection EPA has now disavowed and the very "crystal ball inquiry" that *Essex* prohibits. 486 F.2d at 433 (citation omitted).[2]

EPA similarly argues that a system need not be in "widespread use" or "routine use" to be "adequately demonstrated." Resp. 24. That is correct, but EPA's problem is that *no power plant anywhere* has come close (despite many attempts). A BSER need not be in widespread or routine use, but it must be adequately demonstrated and actually achieve the standard of performance *somewhere* before it can be required *everywhere*.[3]

---

[2] *Sierra Club*, 657 F.2d at 298, does not aid EPA here either. *Infra* p. 20.

[3] To be clear, even that would not be sufficient in and of itself to satisfy the "adequately demonstrated" and "achievable" requirements. *See supra/infra* pp. 3-8 (detailing the various facets of those standards).

EPA asserts that entities do not "volunteer to comply with regulatory standards before any such standard has even issued." Resp. 40 (emphasis omitted). But industry has many reasons to develop and implement emissions control technology outside of EPA regulation. That is why EPA has been able to identify existing examples based on technological innovation for the multitude of BSER determinations before this one. That also is why Congress requires EPA to affirmatively determine that its chosen BSER "has been adequately demonstrated" *before* EPA may impose it through regulation. There is no other way to give meaning to that phrase. Indeed, that is the point of the Inflation Reduction Act and similar funding laws: to incentivize development and adoption of new technologies *without* regulation.

EPA cannot save the Rule by appealing to deference. Resp. 21 (noting technical judgments receive "great deference"). Nor are Petitioners attempting "to reframe a factual dispute as a legal one." NGO Int. 6; *see* Power Int. 17 (similar). Instead, Petitioners raise the *legal* question whether the statutory requirement that a BSER "has been adequately demonstrated" can be met by a system that no power plant has ever employed (or even come close to employing) in the manner EPA

requires by its rulemaking. § 7411(a)(1). If the system EPA selects has never been "completed" and used, *Carr v. United States*, 560 U.S. 438, 448 (2010) (internal quotation marks omitted), it has not been demonstrated (the Court need not even ask whether the demonstration was "adequate[]"), and EPA is not entitled to *any* deference. Answering that legal question requires legal expertise, not technical judgment. *See Loper Bright Enters. v. Raimondo*, 144 S. Ct. 2244, 2267 (2024) ("Congress expects courts to handle technical statutory questions."). Even if some technical judgments are involved, no amount of deference could justify EPA's illogical, reality-denying conclusion.

2. 90% capture has never been adequately demonstrated.

EPA's attempt to defend "its determination on evidence concerning the availability of CCS technology *now*" fails. Resp. 26, 28.

a. EPA has not demonstrated 90% capture through slipstream examples.

EPA says that Boundary Dam, Petra Nova, and Plant Barry each accomplished "90% capture." Resp. 32-24. To arrive at "90% capture," EPA ignores that only a percentage of a portion of the total CO_2 emissions from these facilities was siphoned off and directed through CO_2 capture

equipment. Intervenors make the same error. *E.g.*, NGO Int. 10. Boundary Dam's slipstream capture system can "target" only "65 to 70 percent" of the facility's total emissions. Br. 46. Petra Nova's slipstream system captured just 33% of total emissions when it was online. *Id.* at 50. Plant Barry's slipstream system captured less than 5% of the facility's total emissions. *Id.* at 49.

EPA concedes that these facilities used only slipstream capture systems. Resp. 42 (Boundary Dam and Petra Nova are "slipstreams"); Resp. 34 (Plant Barry uses "the same capture system" as Petra Nova). These systems are designed to capture a limited, consistent stream of CO_2 emissions from a fraction of a facility's total emissions. They are a far cry from the technology needed to capture the dynamic emission streams that an entire facility emits. Br. 46-47. That is why EPA and Intervenors tend to describe these systems in terms of "tons of CO_2 per day" captured—*not* the percentage of overall emissions that those tons represent. CI8244 (89 Fed. Reg. at 39,850) (using this metric for Boundary Dam and Petra Nova); NGO Int. 14 (similar).

Even so, EPA maintains that these slipstream systems somehow demonstrate 90% full-stream capture. But EPA cites only one facility

that ever *attempted* full-stream capture at 90%—Boundary Dam. CI8244 (89 Fed. Reg. at 39,848). Boundary Dam got close to demonstrating its design just once: during a three-day test 9 years ago. *Id.* That test—and the years of experience that followed—led Boundary Dam's owner to conclude that the facility could be reliably operated only on a slipstream system (rather than a full-stream system), which limits the facility-wide capture rate to 65-75%. Br. 46. That is, even though Boundary Dam "was *designed* to achieve CO_2 capture rates of 90 percent" from the facility's full stream of emissions, it was unable to demonstrate that the design works. CI8244 (89 Fed. Reg. at 39,848) (emphasis added). That Boundary Dam—EPA's *best* example—tried and failed to implement a system like that contemplated by the Rule confirms that EPA's BSER has *not* been adequately demonstrated.

EPA next argues that "the slipstreams at both Boundary Dam . . . and Petra Nova . . . are larger than the full exhaust streams of many commercial-size power plants." Resp. 42. But the slipstream problem is not one solely of scale. As the Rule itself acknowledges, "process value[s]," which control the *effectiveness* of capture technology, "such as flowrate, throughput or capacity . . . are designed to operate within specific

ranges." CI8244 (89 Fed. Reg. at 39,853 n.358) (emphasis added). At whatever size, the pressures and volumes in a slipstream remain *fixed, predictable, and constant*. *See, e.g.*, CI0770 (NRECA-EERC Comments 5). The pressures and volumes in a facility's full stream lack such consistency and predictability; full-stream systems experience "variable load." *See* CI0770 (NRECA-Cichanowicz Comments 3 & n.7). That is why slipstreams have been used: they ensure that those values can be maintained in a range that the capture system can handle. *See id.* Thus, even a large slipstream is not equivalent to a smaller full-stream capture system.

EPA's passing reference to the "Shand" facility in Canada, a theoretical system that exists only in a "Feasibility Report," Resp. 49 (citing CI0053 (Shand CCS Feasibility Study)), confirms this. After all, Boundary Dam had a feasibility report too, and that turned out to be wrong. Shand's system is unbuilt, and thus has not demonstrated anything. As even EPA concedes, "planned projects" cannot "independently demonstrate capture technology." Resp. 51. Regardless, the Shand report acknowledges that at Shand, as at Boundary Dam, "it is the ability to partially bypass the capture facility"—*i.e.*, not operate on

a full stream—"that is key in establishing its operational flexibility." CI0053 (Shand CCS Feasibility Study 5).

Ultimately, the key difference between slipstream and full-stream capture systems is not the size of the facility, but the ability to consistently control the characteristics of the exhaust stream. EPA has zero operational examples of a capture system operating under the variable and often unpredictable conditions that would accompany a full-stream deployment. Because EPA only evaluated variable load on slipstream systems, its conclusion that full-stream capture systems experiencing variable load would still satisfy the Rule misses the mark, *contra* Resp. 44 (citing CI8244 (89 Fed. Reg. at 39,853-54)).[4] Put simply, no record evidence supports EPA's conclusion that full-stream systems will operate fine at a variable load.

EPA similarly errs when it speculates "that [slipstream] CCS systems can be readily scaled up," pointing to the "scale up" from Plant Barry to Petra Nova. *E.g.*, Resp. 34. That was just a bigger slipstream: the Plant Barry to Petra Nova "scale up" went from capturing 5% of CO_2

[4] As EPA concedes, Boundary Dam can now handle variable load because it switched to a slipstream system. CI8244 (89 Fed. Reg. at 39,848).

emissions to capturing 33% of CO_2 emissions. *Supra* p. 9. This "scale up" was not a transition from a slipstream system to a full-stream system. The consistency and predictability of the emissions stream remains the hallmark of the scaled-up capture system. These characteristics do not apply to full-stream systems.

EPA's reliance solely on slipstreams is why it can only predict that continuous 90% CCS for the full-stream emissions of a power plant will someday be a reality, not demonstrate that it is today. So, either EPA is reading the Act to allow forward-looking analyses to say 90% CCS has been demonstrated (the position taken in its Rule), or 90% CCS must be demonstrated on existing examples (EPA's current litigating position), even though all fall short of what the Rule requires.

Moreover, EPA concedes that it cannot rely "'solely'" on Petra Nova (or any other project that "received funding under the Energy Policy Act of 2005"). Resp. 50 (quoting 42 U.S.C. § 15962(i)). Yet Petra Nova is the only example EPA offers to support its "scale-up" hypothesis.[5]

[5] EPA also cites "the 2015 New Source Rule" to argue that slipstream emissions "'exit from a common stack'" with other emissions after the capture process is over. Resp. 43 (citation omitted). This is irrelevant. It shows only that, after the emissions have been treated in the slipstream,

Next, EPA cites Project Tundra—another unbuilt slipstream project—to support its conclusion that full-stream capture has already been demonstrated. Resp. 51. Of course, an unbuilt system by definition cannot "adequately demonstrate" anything. And Project Tundra certainly has not demonstrated what the Rule requires. That project is designed to capture CO_2 from two facilities using a single "train" of capture equipment. CI0632 (Minnkota Comments 13). Yet even at this unbuilt state-of-the-art system, "variability in flue gas load" is expected. CI0632 (*Id.* at 12). To help address that variability, Project Tundra's design relies on the same slipstream idea: some emissions from both facilities will be sent through the capture equipment, targeting a combined 70% slipstream of the total emissions. CI0632 (*Id.* at 13 & n.23). Thus, if Project Tundra is built as designed, it still would not show that standalone full-stream capture is possible, because the viability of Project Tundra depends on the availability of the slipstream. More fundamentally, Project Tundra has not "demonstrated" anything at all, because it has not yet been built. And it may never be built, because "even

---

the remaining gases may be exhausted from the same stack as the non-treated gases.

Project Tundra would not fully comply with EPA's mandate." CI0632 (*Id.* at ii).

EPA also argues that facilities have chosen to implement slipstream systems (in lieu of full-stream systems) because of the absence of "regulatory requirements." Resp. 45. But as EPA acknowledged—and SaskPower confirmed—Boundary Dam attempted full-stream capture. *See* CI8244 (89 Fed. Reg. at 39,848). It failed because of "technical challenges." *Id.* Even today, despite careful planning and maintenance, Boundary Dam's full stream of emissions "*cannot* be processed through the CCS facility[.]" CI0687 (SaskPower Comments 1 (emphasis added)). EPA proffers no evidence that a regulatory mandate could overcome those challenges.

More importantly, even if EPA's projections were correct, it would still be asking the Court to trust its theoretical conclusions—which principally consist of "lessons learned" from prior less-than-full-capture examples—that future capture projects will do better on a full stream. Resp. 48; *see* NGO Int. 13-14 (similar). These predictive assessments about what some new-and-improved full-stream capture system could accomplish are projections—which EPA now disavows.

Critically, EPA cannot point to even a single actually-built facility at which these hypotheses have been demonstrated. The Act does not allow EPA to impose a theoretical future system of emission reduction on the Nation's power plants. It requires EPA to pick a system that has been adequately demonstrated.

b. By forecasting unproven solutions to current technical issues, EPA is still relying on predictions.

EPA's discussion of the "technical issues" at Petra Nova and Boundary Dam is similarly unavailing. *See* Resp. 45. EPA's attempt to convert Boundary Dam's 65-70% capture target into a demonstration of 90% facility-wide capture demonstrates the Rule's unlawfulness. And EPA does not dispute that Petra Nova faced consistent outages of its CCS equipment. Resp. 48. Nor does EPA deny that Petra Nova used a slipstream. Again, lessons learned from that challenging slipstream project do not transfer over to full-stream capture.

EPA says "the improvements already employed at Boundary Dam can readily be applied during the initial construction of a new CO_2 capture plant today." Resp. 49. Even if correct, that would only allow a new plant to achieve the 65-70% slipstream capture that Boundary Dam

targets. EPA further identifies a series of problems at Boundary Dam that it believes can be resolved and lead to "key improvements . . . in *future* CCS deployments during initial design and construction." CI8244 (89 Fed. Reg. at 39,849) (emphasis added). EPA asserts those improvements are "common sense," Resp. 49, but nowhere does EPA identify where those improvements have "been demonstrated"—which is what the Act requires.

The technical issues facing these slipstream facilities confirm that 90% capture has not been adequately demonstrated for full-stream systems. EPA thus misses the forest for the trees by arguing about specific technological tweaks and fixes implemented at Boundary Dam and Petra Nova. *E.g.*, Resp. 47-48. But those improvements *still* lead only to capture rates that remain well below the designed rate. That simply emphasizes the need for adequate demonstration of the specific system that EPA selects, before imposing it nationwide. § 7411(a)(1).

EPA further faults Petitioners for failing to "identify any specific technological issue . . . they believe is endemic to 90%-capture systems." Resp. 46. But a system that would comply with the Rule has never been

built. EPA cannot fault Petitioners for failing to identify technological issues endemic to a system that does not yet exist.

More broadly, even if Boundary Dam or Petra Nova used the Rule's full-stream 90% CCS system, the persistent technical challenges that each project faced still confirm that such a system has not been adequately demonstrated. EPA cites cherry-picked spans of performance, Resp. 46-47, but both facilities had significant outages, *see* Br. 48-50. And neither has come close to achieving the annual, continuous, facility-wide 90% CCS that the Rule mandates.

c. EPA's reliance on vendor statements and unconstructed projects shows the Rule is unlawful.

EPA's reliance on vendor statements and unconstructed projects underscores that 90% capture has not been adequately demonstrated.

Unfulfilled vendor promises are not "adequate demonstration." And vendors' untested design estimates do not reflect "the industry's confidence in the broad availability of 90% capture." *Contra* Resp. 51. Yet EPA uncritically adopts *as a legal requirement* the level of vendors' "guarantees"—without any demonstration.

EPA's reliance on planned projects is similarly misplaced. EPA acknowledges that these projects do not "independently demonstrate capture technology." Resp. 51. Yet it continues to place great weight on what Project Tundra "will be able" to do. Resp. 52. This reflects, at best, the facility's intended design—not its actual performance. Experience teaches that the two can be very different. Design does not equal demonstration, as Boundary Dam shows.

That is why neither Project Tundra nor any other future CCS project supports the claim that 90% capture "has been adequately demonstrated." In fact, Project Tundra is designed to capture *only 70%* of emissions from the plant's two facilities.[6] CI0632 (Minnkota Comments 13). EPA glossed over this by calling it capture of "the treated flue gas"—that is, a slipstream capturing only *part* of the facility's emissions. CI8244 (89 Fed. Reg. at 39,850). Even if it performs as hoped, Project Tundra would fall well short of the Rule's required 90% capture from a full stream of *all* emissions from every covered facility. *See id.* at 39,841.

[6] Following EPA's usage, Petitioners use "facility" to refer to an individual electric generating *unit* regulated by the Rule. *See* Br. 24 n.5.

Additionally, while EPA invokes *Sierra Club* to claim that planned projects can help show adequate demonstration, Resp. 51, the record in that case showed "large numbers of utilities" were adopting the required technology, 657 F.2d at 382. EPA cannot claim that here. More to the point, *Sierra Club* highlights the extraordinary nature of what EPA is attempting. In that case, this Court evaluated and upheld EPA's prediction regarding the achievability of a *marginal improvement* in a technology's performance—from the consistently achieved 86% pollutant removal to 90%. *Id.* at 367-68. That gap could also be bridged with demonstrated means—coal washing. *Id.* Here, not only is 90% capture not yet adequately demonstrated, but the performance gap between demonstration projects and the Rule's 90%-capture standard is *far* greater than the 4% gap in *Sierra Club*. EPA attempts to extrapolate from *small fractions* of a plant's total CO_2 emissions in a few isolated examples to continuous 90% CCS at all new baseload natural gas and covered coal plants nationwide. That leap demands more than EPA's prognostication.

EPA rightfully downplays the salience of CO_2 capture examples from other industries, Resp. 52, because they do not support EPA's

conclusion that 90% capture is achievable or adequately demonstrated *for electric generating facilities*. Different input materials and processes render these examples inapt. Br. 58-59. Most importantly, EPA offers no evidence that even these efforts continuously achieved 90% capture. *See* Resp. 52.

d. EPA's BSER determination for new gas plants lacks record support.

EPA's attempt to defend its conclusion that 90% capture is also adequately demonstrated for new gas facilities equally fails. *E.g.*, Resp. 37-38, 52-54. First, the examples of gas facilities employing CCS are woefully inadequate. *Contra* Resp. 37. Bellingham captured barely over 10% of the plant's emissions. Br. 54. Mongstad is *testing* capture technology on a tiny stream of flue gas from a refinery or the power plant serving it. CI8244 (89 Fed. Reg. at 39,927 & n.768); *see* Br. 55. Capturing 90% of emissions from a slipstream is very different from capturing 90% of emissions from a full exhaust stream. *Supra* pp. 8-16.

EPA also references a handful of planned projects that are "presently being designed" and hope to reach 90% capture. Resp. 37. But design does not equal demonstration, and aspirations do not equal performance. *See supra* pp. 18-21.

Left with *zero* examples of gas plants achieving anything even remotely in the realm of 90% CCS, EPA turns to coal plants. Resp. 38. But those poor examples do not adequately demonstrate 90% CCS even for coal plants. *See supra* pp. 8-16. And they are completely inapposite for gas plants. The best EPA can do is assert that similar solvent systems *can* remove some CO_2 at the lower concentrations present at gas facilities. But EPA failed to respond to commenters' concerns about the additional energy (and therefore additional cost) required to run those systems. *See* CI8914 (Response to Comments ("RTC") Chap. 4 at 25-26).

The record for 90% CCS at gas plants is thus even weaker than the deficient record for coal plants.

3. CO_2 transport and storage are not adequately demonstrated or capable of supporting an achievable standard of performance by 2032.

a. EPA's novel gloss on "achievability" misreads the Act.

EPA attempts to salvage its interpretation of the Act by redefining "achievable." Resp. 57. But EPA does not use the dictionary definition of "achievable," *i.e.*, something "that can be achieved." *Webster's New World Dictionary, College Ed.* (1962). Instead, EPA breaks the word into two parts—"achieve" and "able"—to claim that the Act merely requires a

performance standard to be attainable by the compliance deadline. Resp. 57-58. But EPA's assertion that "present availability does not equate to achievability," Resp. 64, ignores the context of the Act.

Congress linked achievability and adequate demonstration by defining "standard of performance" as "reflect[ing] the degree of emission limitation achievable through the application of the [BSER], which . . . has been adequately demonstrated." § 7411(a)(1). EPA's attempt to rewrite the Act to authorize standards based on the degree of emission limitation that *will be* achievable in the future (in EPA's view), rather than the degree of emission limitation that *is* achievable now, cannot be squared with the text Congress enacted.

EPA cites no authority for the far-fetched notion that a standard of performance can be applicable *now* to covered sources when it is achievable *only in a hypothetical future*. A pipeline network that does not yet exist cannot be the basis for determining that transporting immense amounts of CO_2 via that network is *currently* achievable. Br. 62-63. And geologic "formations" with the "potential" to have the right characteristics for sequestration are no demonstration of actual capability. *Contra* Resp. 61; *see* Br. 67. So EPA resorts to more *post hoc*

reasoning, this time directly contradicting its statement in the preamble that "a standard of performance is 'achievable' if a technology can reasonably be projected to be available to an individual source *at the time it is constructed* that will allow it to meet the standard." CI8244 (89 Fed. Reg. at 39,835) (emphasis added). But EPA can no more justify the Rule now by redefining "achievable" than it can by reinterpreting "has been adequately demonstrated."

b. Even if the Act allowed EPA to promulgate a rule based on projected future achievability, this Rule misses the mark.

On transport and storage, EPA's responses are also unavailing. EPA appears to view its task as satisfied if a technology is theoretically possible. Resp. 55-56. Yes, CO_2 *can* be transported by pipeline and stored in geological formations. But EPA must prove that what it asserts is the best *system* of emission reduction—90% capture, transport, *and* storage—has been adequately demonstrated, making its emissions limitations achievable.

In so doing, EPA must establish that its performance standard (already applicable to new facilities even if "compliance" is extended) can be achieved by all covered facilities. A standard is "achievable" only if the

system is "available for installation," *Portland Cement Ass'n v. Ruckelshaus*, 486 F.2d 375, 391 (D.C. Cir. 1973), to "the industry as a whole," *Nat'l Lime Ass'n v. EPA*, 627 F.2d 416, 431 (D.C. Cir. 1980). Thus, both the technical infeasibility of CO_2 transport and storage at the levels the Rule requires *and* the inability of the required infrastructure to develop in the timeframe required independently render the Rule unlawful. EPA lacks record support to conclude that covered sources could design, permit, and construct CO_2-capture systems, pipeline networks, and storage facilities by 2032.

Capture. EPA misses Petitioners' point. EPA offers *no* explanation for overlooking that using multiple trains of capture equipment to hit the 90%-capture requirement would be infeasible in practice.[7] *See* Br. 61. EPA claims to have done so. Resp. 59 (citing CI8244 (89 Fed. Reg. at 39,886)). But that page of the preamble addresses a *different* issue: the siting of capture equipment, not the need for "more trains of capture equipment" than EPA has accounted for. And contrary to EPA's dismissive response, Resp. 59-60, n.16, the record *does* show that plants

[7] Nor has EPA provided any example of where this has been demonstrated.

would require multiple trains, and also that multiple trains are not feasible. CI0548 (Otter Tail Comments 28) ("The only way achieving the proposal's [emissions] rate might be possible would be to install multiple train systems," which significantly increase acreage and costs). EPA's cursory dismissal of this significant issue is inadequate to address this "important aspect of the problem." *Motor Vehicle Mfrs. Ass'n of U.S., Inc. v. State Farm Mut. Auto. Ins.*, 463 U.S. 29, 43 (1983).

Transport & Storage Infrastructure. EPA's prognostication that sufficient transport and storage will materialize by 2032 hinges on the notion that "[m]ost plants are near deep saline formations that have the potential for long-term carbon-dioxide storage sites." Resp. 61. Putting aside that EPA considers a site 100 miles away to be "near," *id.*, "most" is not "all." Many plants are nowhere near either existing or potential future storage facilities. Br. 64. EPA thus fails to demonstrate that the Rule's 90% CCS system is "achievable" for those plants. *See Nat'l Lime Ass'n*, 627 F.2d at 431 n.46 (EPA must set a standard that can be met "under most adverse conditions which can reasonably be expected to recur[]"); *see also id.* at 431 (focusing on "the 'achievability' of the promulgated standards for the *industry as a whole"* (emphasis added)).

While EPA claims that States and the federal government "are seeking to expedite pipeline siting," it mentions only a handful of the 50 States. Resp. 62-63 (citing CI8244 (89 Fed. Reg. at 39,858-61)). One of those States, Illinois, has since imposed a moratorium on permitting new CO_2 pipelines. 220 Ill. Comp. Stat. 75/20 (2024). EPA declares litigation and regulatory hurdles are "surmountable." Resp. 62. That is no relief to entities that have an obligation to provide service and that face a mandatory compliance deadline in States that may impose (and have imposed) obstacles to building and operating new CO_2 pipeline systems.

Trying to revive its surmise that shorter pipelines can accomplish EPA's goals, EPA twists Petitioners' argument on this point. Resp. 63. Petitioners highlighted how EPA improperly assumed, without support, that shorter CO_2-transport pipelines would be easier to permit and construct. Br. 65. EPA's assertion that Petitioners take the "exact opposite" position elsewhere, Resp. 62 n.18, only reveals EPA's lack of understanding. Petitioners explained that *lateral gas* pipelines—which can connect to an existing network—tend to be shorter (15 miles) and not as controversial. Br. 124. But EPA's "shorter" *CO_2* pipelines would be up

to 100 miles long. Resp. 61. And as Petitioners explained, "many power plants are served by *non*-lateral pipelines." Br. 124.

Turning from transport to sequestration, EPA assumes that all "nearby," "potential" storage sites could be permitted in a timely manner. CI8244 (89 Fed. Reg. at 39,930). But EPA discusses "geographic availability" separately from its permitting analysis, without connecting the two. *Compare* CI8244 (89 Fed. Reg. at 39,856, 39,863), *with* CI8244 (*id.* at 39,866-69). The record shows that substantial additional investigation, testing, and community involvement will be required before any such "site" could be permitted, constructed, and used for CO_2 storage—which also means substantial additional costs. *See* CI8244 (*id.* at 39,868).

EPA seeks support for adequate demonstration in the *ipse dixit* that "[m]any more sequestration sites will be developed due to the Rule." Resp. 65. But "if you mandate it, they will build it" is circular reasoning, not reasoned decisionmaking. *See Bennett* v. *Spear*, 520 U.S. 154, 176 (1997) ("speculation" and "surmise" render agency action arbitrary and capricious).

Nor is "trust us" viable support. EPA asserts that because "federal policy promotes [sequestration] development," and because EPA "has allocated more resources to its permitting program," regulated facilities will be able to meet their new obligations. Resp. 65. But EPA cites no example of a pipeline or storage project acceleration from the "FAST" Act. Resp. 65. In contrast, comments showed that one such project still took more than six years just "to get permitted." CI0770 (NRECA Transp. & Storage App'x 22). EPA's tautology that "increased interest in these projects confirms EPA's determination that storage is broadly available," Resp. 66, is insufficient to support the Rule.

Full CCS Timeline. When it comes to studies allegedly supporting EPA's unrealistic build-out timeline, EPA lacks record support. Even the study that EPA relies on for capture explains that, while it does not evaluate transport or sequestration, those aspects are "critical to the feasibility and timeline of implementing a CCS project." CI9095 (GHG Mitigation Measures-Steam TSD, Att. 17 at 2). And yet, instead of identifying or commissioning a study that evaluates all three CCS elements together and analyzes a reasonable timeline for one utility to permit and construct the entire system, "EPA primarily relied on

separate evidence to determine the timelines." Resp. 69. EPA's failure to fully assess how the CCS process would work in practice ignores an "important aspect of the problem." *State Farm*, 463 U.S. at 43.

EPA's response regarding NEPA, Resp. 70, likewise ignores reality. EPA cannot assert that NEPA review can be finalized concurrently with "other aspects" of project development, because NEPA review must be completed *before* construction can start. *See* 40 C.F.R. § 1506.1.

4. Case-by-case exemptions cannot rescue an unlawful Rule.

When backed into a corner on adequate demonstration and achievability, EPA pivots to the Rule's "flexibilities" for existing sources. Resp. 104; *see id.* 58-59, 64, 70 (similar). But no amount of flexibilities would grant EPA license to depart from its statutorily-assigned task by identifying an undemonstrated BSER and establishing an unachievable standard of performance.

Regardless, the narrow flexibilities fall into three categories: (1) alternate forms of the presumptively-approvable standard; (2) limited one-year compliance extensions EPA must approve; and (3) invoking a facility's remaining useful life and other factors ("RULOF"). Notably, only one of these flexibilities (compliance extensions) applies to *new* sources.

The "alternate form[s]" available offer no relief from an improper standard. CI8244 (89 Fed. Reg. at 40,055). Facilities still must "achieve equivalent or better emission reduction as would be achieved through the application of a rate-based standard of performance," *id*, which no identified system can do. The compliance extensions allow a one-year extension only in exceptional circumstances ultimately determined by EPA. CI8244 (*id.* at 40,014). Under the Rule, RULOF is available only if a State shows that there are "fundamental differences" between the facility at issue and the information EPA considered in setting the BSER and the accompanying presumptive standard. CI8244 (*id.* at 39,967). States' congressionally-granted flexibility in applying a standard of performance to existing sources, § 7411(d)(1), is not a legal substitute for a standard that complies with the Act.

B. On cost, EPA wrongly ignores billions of dollars the public will bear.

EPA also disregarded the Rule's staggering "cost." § 7411(a). The agency admits that it "viewed 90% CCS as too costly" to qualify as the BSER just five years ago. Resp. 72. It concedes that the astronomical sums involved—which could surpass $100 billion by the Rule's compliance deadline—have not vanished in the intervening years, but

merely have been shunted onto taxpayers through a "burden" on "the public fisc" in the form of tax credits. Resp. 79 n.26; *see* Br. 80. And it tellingly disavows its earlier claim that "adding" this king's ransom "to the national debt" through "borrowing" would be a cost-free enterprise. Resp. 79 n.26; *see* Br. 88.

EPA nevertheless maintains that this massive transfer "'*offsets* a significant portion' of CCS costs," and therefore that it properly *ignored* that portion when it decided to require 90% CCS. Resp. 72 (quoting CI8244 (89 Fed. Reg. at 39,881)) (emphasis added). But treating "billions of dollars in economic costs" as free money is a textbook case of unreasoned decisionmaking. *Michigan v. EPA*, 576 U.S. 743, 752 (2015). EPA's various defenses do not pass muster.

Text. EPA notes that Section 7411 does not require it to consider "'cost' in general," but only "the cost of *achieving such reduction*." Resp. 75. It concludes that only "costs to regulated sources" must be considered. *Id.* But that does not follow. While Congress wanted EPA to consider the cost of achieving the reduction, it never limited the analysis to costs *borne by certain parties*. EPA must therefore add words to the statute to get from "the cost of achieving such reduction," § 7411(a)(1), to "the cost *to*

the source of achieving" such reduction, Resp. 19 (emphasis added); *see Loper Bright*, 144 S. Ct. at 2266 (if an agency's interpretation "is not the best, it is not permissible"). At the same time, EPA ignores that, elsewhere, Congress *did* add words to expressly limit the types of costs that the agency must address. Br. 83 (citing §§ 7411(j)(D)(i)(b)(3), 7425(b)(3)). By contrast, nothing in Section 7411(a) excludes consideration of a $100-billion-plus addition to the national debt.

Remarkably, EPA effectively admits that under its interpretation, Congress could "subsidize emission reductions costing more than '$2 trillion every year,'" and the agency could claim the costs of such a rule were nil. Resp. 78 n.25. It only insists that this hypothetical is "not this case," confirming that its theory has no limiting principle. *See id.*

Purpose. Lacking a textual foothold in the *Clean Air Act*, EPA pivots to the *Inflation Reduction Act*, arguing that the Rule respects a "Congressional policy judgment" that it is "worthwhile" to "subsidize" CCS. Resp. 76. That conflates two distinct issues. Yes, Congress wanted to "facilitate" the adoption of CCS by using "taxpayers' resources." *Id.* So if a source *chooses* to install carbon-capture technology, it may get a tax credit. But that says nothing about whether Congress wanted EPA to

mandate its adoption, or to wave away its costs in determining whether 90% CCS is the BSER. In short, the Inflation Reduction Act directs that these costs should be *shifted* from sources to taxpayers, not that they should be *ignored* as "costs" under the Clean Air Act.

Likewise, it is beside the point that Congress appropriated funds to EPA to "assess" anticipated emissions "reductions" resulting "from changes in domestic electricity generation and use" through fiscal year 2031 and to incorporate that "assessment" in "ensur[ing] that [such] reductions … are achieved through use of the existing [Clean Air Act] authorities." § 7435(a)(5), (a)(6). Nothing in these "directives" remotely reflects an "expectation" that EPA would treat the tax credits as costless here. Resp. 77.

Legislative History. Because neither the Clean Air Act nor the Inflation Reduction Act supports treating taxpayer subsidies as costless, EPA is left with Rep. Pallone's floor statement that "EPA may consider the impact of the CCS tax credits in lowering the costs of those measures." *Id.* (cleaned up). But even that does not explain how EPA is to account for the accompanying *increase* in taxpayer costs. Br. 87-88. More important, despite EPA's protests that Rep. Pallone was the

"chairperson" of the relevant "committee," Resp. 78, "the views of a single legislator, even a bill's sponsor, are not controlling," *Mims v. Arrow Fin. Servs., LLC*, 565 U.S. 368, 385 (2012). This "floor statement[]" by an "individual legislator[]" is therefore no more "illuminating" than any other. *NLRB v. SW Gen.*, 580 U.S. 288, 307 (2017) (addressing statement of bill sponsor, who was also relevant committee chair).

All that aside, EPA concedes that the tax credits will "expire" after 12 years, at which point its system may "no longer" be "cost-reasonable." Resp. 80; *see* Br. 85-86. But just as "borrowing" only "defer[s]" the "taxpayer burdens" imposed by the credits, Resp. 79 n.26, wielding "the 'exorbitant' costs" of "carbon-capture" to "'force the closure' of all affected 'coal-fired power plants'" is unlawful regardless of when the bill comes due, *West Virginia*, 597 U.S. at 776 (Kagan, J., dissenting); *see id.* at 728 n.3 (majority). And EPA's promise "to review" the Rule by 2041 and revise "if appropriate" is irrelevant. Resp. 80. If the Rule's burdens are unsustainable absent another round of multibillion-dollar subsidies, it is not "cost-reasonable at this time." Resp. 81; *see* Br. 86.

Because EPA arbitrarily blinded itself to billions of dollars in costs based on either a misinterpretation of the statute or a misunderstanding

of economics, the Rule must be vacated. And while EPA now suggests it "considered the tax credit in determining that the costs of CCS do not exceed the benefits," the record confirms that it never treated the credits as "costs" or determined the Rule was warranted notwithstanding those burdens. Resp. 79. The portion of the Response to Comments EPA cites never mentioned the credits. *Id.* (citing CI8914 (RTC Chap. 2 at 12-15)). And the Regulatory Impact Analysis (RIA) it invokes—but "did not rely on," Resp. 79 n.27—asserted that "costs remain *lower*" due to the Inflation Reduction Act. CI8913 (RIA at ES-7) (emphasis added).

Thus, even if the agency "*could* have" declared 90% CCS to be the BSER notwithstanding its true costs, "EPA's action must be measured by what it did, not by what it might have done." *Michigan*, 576 U.S. at 759-60 (cleaned up) (rejecting reliance on cost-benefit calculation in "regulatory impact analysis"). And what EPA "did" here was ignore enormous costs merely because taxpayers will bear them. That is unlawful.

C. EPA concedes it ignored a "primary element" of grid reliability, making its assessment of energy requirements arbitrary.

EPA failed to analyze appropriately the risk its Rule poses to the nation's "energy requirements," in dereliction of its statutory duties. § 7411(a)(1). Grid reliability is an element of "energy requirements." Br. 89. At a time when electricity demand is skyrocketing, the Rule presents a dual threat to grid reliability by forcing dispatchable generation sources to retire while making it harder to replace those resources. Br. 90; *see, e.g.*, CI0695 (NMA Comments 72-81).

EPA mainly responds to these concerns by maintaining that its own modeling of the power sector revealed no reliability concerns. Resp. 89-102. But EPA concedes its model addressed only one component of grid reliability—resource adequacy, Resp. 95—and ignored the "primary element" of "operational reliability." Resp. 95-97. EPA insists this Court "should not second-guess" its "technical judgment[]" in choosing not to model operational reliability, Resp. 93, but EPA cannot "entirely fail[] to consider an important aspect of the problem," *State Farm*, 463 U.S. at 43. Therefore, the Rule is arbitrary and capricious.

Operational reliability refers to "the ability of the Bulk Power System to withstand sudden disturbances, such as electric short circuits or the unanticipated loss of system elements from credible contingencies, while avoiding uncontrolled cascading blackouts or damage to equipment." CI8175 (America's Power Supplemental Comments 4) (quoting North American Electric Reliability Corporation ("NERC"), *Reliability Terminology* (Aug. 2013)). "It includes ensuring sufficient transmission capacity is available—regardless of whether enough electric generating capacity exists to meet electricity demand (*i.e.*, "resource adequacy"). Without sufficient transmission capacity, the grid will be unstable, resulting in blackouts and brownouts. CI8175 (*Id*. at 5).

Having conceded that operational reliability is a "primary element[]" of grid reliability, Resp. 95, EPA tries to minimize its failure to assess operational reliability by arguing that Section 7411(a)(1) gives it "discretion" as to how to assess energy requirements. Resp. 89. But EPA cannot both admit a problem exists and then ignore it. *State Farm*, 463 U.S. at 43; *Ohio v. EPA*, 144 S. Ct. 2040, 2053 (2024); *see* 5 U.S.C. § 706(2)(A). Nor may this Court defer to EPA's so-called "technical judgment[]," Resp. 93, when EPA refuses to exercise that judgment by

failing to evaluate operational reliability. The question here is whether EPA's analysis of the Rule's impact on the nation's energy requirements was arbitrary and capricious because it failed to account for a "primary element" of grid reliability, specifically operational reliability. *See* Resp. 95, 97; *State Farm*, 463 U.S. at 43; *Ohio v. EPA*, 144 S. Ct. at 2053; 5 U.S.C. § 706(2)(A). The answer is yes.

EPA argues it "focused on resource adequacy because that is the aspect of reliability that the Rule most directly affects." Resp. 95. False. Operational reliability "depends on having the right mix of reliability attributes"—including energy adequacy, fuel assurance, seasonal availability, long duration at high output, ramping, inertia, and voltage stability. CI8175 (America's Power Supplemental Comments 4). The coal fleet provides all of that. *Id.* The Rule directly affects operational reliability by forcing coal plants to retire prematurely and constraining the capacity of new natural gas plants. Br. 90-92. The essential reliability attributes these plants provide will disappear with them. It is impossible to properly assess the Rule's impact on grid reliability while ignoring the impact of these retirements on operational reliability.

EPA claims it would have been "unrealistic" to perform the "granular" analysis of operational reliability. Resp. 95-96. False again. The Quanta reliability study, for example, accomplished precisely this type of assessment. Br. 101-02; *see* CI8175 (America's Power Supplemental Comments 5-6). EPA fails to articulate why it could not perform or commission an analysis readily accomplished by a small trade association. EPA also did not explain why it elected not to pursue some reasonable alternative. For example, it could have analyzed the regions that the Rule puts at greatest risk, such as those served by MISO and PJM. CI0623 (MISO Comments 2) (warning about "the risk of a looming [energy] shortfall" caused by the Rule); *see* CI9072 (PJM Territory Served).

EPA also asserts it made up for its deficient modeling by citing various studies, Resp. 96, 97, while State Intervenors note that EPA consulted with FERC, grid operators, and other energy stakeholders, State Int. 9-10. But EPA never refutes Petitioners' point that these generic studies did not analyze the Rule at all. *See* Br. 100. And while EPA may have "consult[ed]" with energy stakeholders, *see generally* CI9090 (FERC Annual Reliability Technical Conference Transcript), the

agency ignored their concerns. Indeed, *FERC expressly warned* EPA about the danger of disregarding operational reliability, stating: "To promulgate a final rule in the absence of such analysis would be irresponsible and unreasoned." CI8216 (Comm'r Danly Comment 4).[8]

EPA also argues that the IPM captures real-world decision-making and constraints to evaluate resource adequacy. Resp. 97. But EPA's own Technical Support Document undermines this assertion. It states that the IPM "is designed to ensure resource adequacy, either by using existing resources or through the construction of new resources." CI8916 (TSD - Resource Adequacy 6). Yet it also "assumes that adequate transmission capacity exists to deliver any resources located in, or transferred to, the region." *Id.* A reliability analysis based on such an assumption does not capture real-world constraints. *See* CI0635 (ERCOT Comment 4).

EPA also claims errors identified in its modeled plant retirements are not errors at all, but merely "reasonable outputs from a complex

[8] Further, while State Intervenors tout the Rule's so-called "reliability provisions," State Int. 10, FERC expressly warned EPA of the inadequacy of such measure, explaining it would not be "rational or responsible to pin the hopes for a reliable and adequate electric system on establishing 'reliability off-ramps.'" CI8216 (Comm'r Danly Comment 3).

system model." Resp. 101. This does not explain, however, why EPA adopted a baseline that commenters warned was egregiously wrong. *See* CI0710 (PGen Comments 102); CI0710 (PGen Comments, Att. M 19). The baseline assumed the retirement of 66 units with no such plans, accounting for *40 percent* of the retirements in EPA's baseline. CI0710 (PGen Comments, Att. M 19). EPA's response does not explain multiple illogical "outputs"—for example, why a unit would incur the expense of retrofitting CCS only to retire shortly thereafter, or why a unit projected to retire in 2028 would still be operating in 2030. *See* CI0710 (PGen Comments 102). EPA claims such errors are not sufficiently "pervasive" to undermine its Rule. Resp. 101. But EPA ignores that the number of retirements in the baseline and the number of retirements ushered in by EPA's regulation are among the most significant cost drivers—a key consideration under the statute. EPA thus again unlawfully "ignore[s] 'an important aspect of the problem.'" *Ohio v. EPA*, 144 S. Ct. at 2053.

II. EPA's gas co-firing alternative BSER for existing coal facilities is unlawful.

The Rule's alternative BSER for existing coal facilities—conversion to a "hybrid" plant that combusts at least 40% natural gas for fuel (co-firing), followed by retirement by 2039—is equally unlawful. CI8244 (89

Fed. Reg. at 39,801). Contrary to EPA's assertions, the Supreme Court's holding in *West Virginia* forecloses EPA's attempt to treat generation shifting as a system of emission reduction.

Even setting aside EPA's lack of statutory authority to mandate generating shifting, the co-firing requirement violates Section 7411(a)(1) for three reasons. First, 40% co-firing is not achievable because most coal-fired plants lack access to natural gas, and Section 7411 does not empower EPA to require the construction of thousands of miles of natural gas pipelines. Second, even if EPA could require the construction of pipeline infrastructure, the standard remains unachievable because (i) there is no guarantee the plant could obtain access to the large amount of natural gas necessary to co-fire at 40%, and (ii) EPA's timeline for pipeline infrastructure construction is impossibly short. Third, even continuing to assume that EPA could require thousands of miles of natural gas pipeline construction (which it cannot), the high cost of this infrastructure renders this BSER unlawful.

A. Requiring a coal plant to become a 40% gas plant is not a lawful system of emission reduction.

The 40% co-firing alternative is an undisguised requirement to shift energy generation from coal to natural gas—precisely what the Supreme

Court said EPA cannot do. *West Virginia*, 597 U.S. at 727-35. EPA argues that the generation shifting resulting from the 40% co-firing requirement is "traditional" fuel-switching blessed by the Supreme Court in *West Virginia*. Resp. 107. Not so.

As EPA concedes, it cannot "carry fuel-switching to the point of 'direct[ing] existing sources to effectively cease to exist.'" *Id.* at 108 (quoting *West Virginia*, 597 U.S. at 728 n.3). Nor can it require sources to "transform . . . into something entirely different." *Id.* at 109. But that is what the Rule requires. As Petitioners have explained, coal-fired plants would have to undergo significant modifications to enable 40% co-firing. Br. 113-14. That is, existing coal-fired plants would have to cease to exist and be replaced with new hybrid coal/gas units. Requiring that transformation exceeds EPA's authority.[9]

---

[9] EPA seeks to minimize the long-standing principle in the Clean Air Act that EPA cannot "redefine the source," *see* Br. 114 & n.19, because that concept typically applies in a different program under the Act, Resp. 109 n.34. But that concept applies when determining Best Available Control Technology for a source, and the emission standard based on that technology is intertwined with Section 7411: it cannot be less stringent than the "applicable standard" under Section 7411. *See* 42 U.S.C. § 7479(3). If EPA cannot redefine the source under the Best Available Control Technology, then it follows that EPA cannot do so under the applicable Section 7411 minimum for that technology. And while that

EPA tries to distinguish the Rule on the grounds that the Clean Power Plan required grid-level generation shifting rather than from individual facilities. Resp. 107. But the discussion from *West Virginia* that EPA cites contravenes EPA's position: The Court held that the Act conferred no authority on EPA to decide "how much of a switch from coal to natural gas is practically feasible," and "doubt[ed]" EPA could "order[]" a coal plant to become a natural gas one. 597 U.S. at 728 n.3, 729. But there is no material difference between requiring a coal plant to become a natural gas plant and requiring it to become a 40% gas plant, as each requirement leads to generation shifting at both the unit and grid level. *Contra* State Int. 15. In short, EPA has once again issued a Rule that purports to decide "how much of a switch from coal to natural gas" is optimal—here, 40%. The Rule thus repeats the flaws of the Clean Power Plan by mandating a switch from coal to gas as the means of reducing emissions.

Nor is the Rule an exercise in "traditional" fuel switching consistent with past EPA rules. *See* Resp. 108; State Int. 14-15. Certain kinds of

---

concept has never been explicitly addressed in a Section 7411 rulemaking, that is simply because before this Rule EPA had never before tried to redefine a source under Section 7411.

"fuel switching" can be traditional control measures. *See* Br. 112-13. But that does not mean a system of emission reduction can include switching an existing plant to an *entirely different* kind of fuel. Indeed, *every* example of previous "fuel switching" measures that EPA provides involves standards for *new* sources that required a lower-emitting version of an *already compatible fuel*. *See* Br. 112-13. That is not what the Rule does. Far from "ignor[ing]" the issue, Resp. 108 n.33, Petitioners walked through every example of fuel switching in the Rule and demonstrated the 40% co-firing requirement is categorically different from each of those examples, Br. 113-14. As Petitioners also explained, it is one thing to require a source to burn a different kind of fuel of the same type (*e.g.*, low-sulfur coal instead of high-sulfur) or require a brand-new source to be constructed to allow it to burn a certain fuel (*e.g.*, natural gas with oil used only as backup fuel). Br. 113-14. It is quite another to require the retrofit of an existing unit to burn a fuel it was not originally designed to use.

EPA also leans on *West Virginia*'s description of EPA's examples of traditional emission control measures and notes the Court "cited to the [Clean Power Plan] preamble's discussion of co-firing with natural gas."

Resp. 108; *see also* State Int. 14-15. *West Virginia* does indeed cite a page of the Clean Power Plan's preamble, 597 U.S. at 727, where EPA described fuel switching as a "traditional" tool and said fuel switching "for CO_2 emissions . . . entails co-firing with natural gas," 80 Fed. Reg. 64,662, 64,784 (Oct. 23, 2015). But *West Virginia's* quotation of the preamble describing these types of traditional measures did *not* include the examples EPA mentioned in the Clean Power Plan. 597 U.S. at 727. On the contrary, the Court *eliminated* EPA's reference to co-firing with natural gas and did not embrace EPA's position. *See id.*

Finally, EPA argues fuel switching is permissible because *some* units may be able to achieve it after only limited changes, referring to statistics on what coal-fired plants may have to do to be able to co-fire natural gas. Resp. 108 (referring to "many," "most," and "nearly half" of coal plants). That just proves the point. A performance standard must be achievable by "the industry as a whole"—that is, it must represent the "least common denominator" achievable by a source anywhere in the country. *Nat'l Lime Ass'n*, 627 F.2d at 431; McCutchen Letter 1. EPA's

statistics, taken at face value,[10] instead show that of the 565 coal-fired electric generating units in the United States at the end of 2021, more than half (316) do not use gas at all (either as a fuel or as a startup source), and more than one-third (196) have no connection to a gas pipeline. *See* Resp. 108. These statistics demonstrate that the 40% co-firing system is neither achievable by the industry as a whole nor the least common denominator that can be achieved by a source anywhere in the country.

The Supreme Court was unequivocal in *West Virginia*: EPA cannot require generation shifting under Section 7411. 597 U.S. at 734-35. Yet the Rule would require exactly that. EPA's attempt to recast this generation shifting as a traditional fuel switch is belied by its own examples and the reality that most plants cannot feasibly convert as the Rule requires.

[10] Petitioners provided different statistics showing the problem is even worse than EPA states. Br. 115-16, 121. While Petitioners stand by those statistics, even EPA's numbers demonstrate the Rule would require most facilities to undertake significant infrastructure projects.

B. 40% gas co-firing is not achievable.

A performance standard must "*reflect[]* the degree of emission limitation *achievable* through application of the [BSER]." § 7411(a)(1) (emphases added). That requires that the standard be achievable *now*. Br. 115. The 40% co-firing standard is not. Instead, it would require a massive build-out of natural gas infrastructure before most sources could hope to comply. Br. 116.

EPA argues that a system of emission reduction need not be achievable "*immediately*," and "implement[ing] *any* system will require sources to take steps to comply . . . that presumably cannot occur *instantaneously*." Resp. 111 (emphasis in original); *see also* State Int. 16-17. In EPA's view, that is, building thousands of miles of pipelines is indistinguishable from requiring individual facilities to install on-site emissions control equipment. *See* Resp. 112.

EPA's example—involving flue gas desulfurization—shows just how different the Rule's co-firing BSER is from traditional Section 7411 emission control requirements. *See* Resp. 112. When a flue gas desulfurization system is installed, the emission limit based on that control technology is realistically achievable at the source without

anything more. In contrast, here, even if a boiler is modified to co-fire 40% natural gas, the emission limit is unachievable for most plants because they will still lack adequate access to gas. That distinction is key, and yet EPA all but ignores it.

EPA argues a BSER can "involve[] the construction of off-site facilities or the transportation of materials to and from the source." *Id.* at 111. But EPA's examples concern emission controls that produced waste requiring offsite disposal or storage. *See* CI8914 (RTC Chap. 2 at 4-6). In those circumstances, the emission standard can be met no matter how the waste is handled. In other words, in EPA's examples, the ability to comply with the emission standard does not depend on the construction of off-site infrastructure.

EPA also argues that *National Lime* does not show that EPA's standards must be achievable industrywide, but requires only that EPA identify and consider those variable conditions in the regulated industry that could affect covered sources' ability to meet a relevant standard. Resp. 112; *see also* NGO Int. 14 (similar). But *National Lime* is clear: the record must "support the 'achievability' of the promulgated standards *for*

the industry as a whole," 627 F.2d at 431 (emphasis added), which is not the case with EPA's 40% co-firing BSER, Br. 115-16.

Finally, EPA asserts that nothing in Section 7411 precludes it from including pipelines and other offsite components in an emission reduction system. Resp. 111. EPA cites no authority for that view, in part because EPA has never successfully set a standard based on off-site infrastructure development. Indeed, the Supreme Court has expressed skepticism that EPA could require an emission reduction system that goes beyond the source, observing that "EPA has acted consistent with such a limitation [to regulating the source itself] for the first four decades of the statute's existence." *West Virginia*, 597 U.S. at 734. That same skepticism is warranted here. Emission limits are not achievable when, "by design, there are no particular controls a coal plant operator can install and operate to attain the emissions limits." *Id.* at 726. The gas co-firing standards are not achievable because no matter what changes are made *at the source*, for the vast majority of sources, there is no ready access to the necessary natural gas. This renders the 40% co-firing BSER unachievable and therefore outside the bounds of Section 7411.

C. EPA failed to establish that coal plants can obtain an adequate supply of firm access to gas to support 40% co-firing.

Petitioners explained that co-firing 40% gas "requires the plant to have 'firm access' to natural gas." Br. 118. EPA insists it assembled a "substantial record" showing that plants would have the access to natural gas that they needed. Resp. 113. But the record materials EPA cites do not support that conclusion.

EPA assumed gas would be available on a firm basis by relying on a consultant's conclusion that adequate gas would be available on the "spot" market. CI8914 (RTC Chap. 6 at 10). But firm access and the spot market are different. *See* Br. 119-20. The spot market does not provide the uninterruptible, consistent, and dependable supply of gas needed for 40% co-firing. *See* Br. 118-20. EPA therefore has "failed to consider an important aspect of the problem": whether enough gas can be delivered on an uninterruptible and consistent basis (*i.e.*, on a firm basis). *See State Farm*, 463 U.S. at 43.

EPA says it determined on the record that firm access is unnecessary. Resp. 113. But the record shows only equivocation. On the one hand, EPA says that "[t]he lateral capacity that could be required for

cofiring . . . *would be provided to those plants on a 'firm' basis*." CI8914 (RTC Ch. 6 at 10) (emphasis added). But in the next paragraph, EPA says it "does not agree with the assertion that firm capacity is required along mainlines to make cofiring possible." *Id.* And it asserts that EPA's consultant confirmed facilities can buy enough gas on the spot market to meet their needs. *Id.* None of this grapples with comments explaining the necessity of firm access to ensure a reliable electricity supply. Power generators need firm access to ensure service in all conditions, and "[t]he spot market does not provide the uninterruptible, consistent, and dependable supply of gas needed for 40% co-firing." Br. 119-20. Despite EPA's assertions to the contrary, it has not adequately responded to comments addressing this issue. The Rule therefore failed to adequately address the necessary factors, including "energy requirements." § 7411(a)(1).

EPA's failure to address this issue is further illustrated by its reliance on firm access in its cost analysis. Resp. 114 n.35. EPA never explains why its cost analysis assumes firm access when EPA's expert, on which it otherwise relies, says the necessary supply of gas will be available only on the spot market. *See* CI8914 (RTC Chap. 6 at 10). EPA

never assessed the impacts on costs that would result from using the spot market alone, or how those costs would differ from EPA's assumed costs based on firm access. And the difference between spot-market and firm-access prices can be substantial, as spot-market prices can be extraordinarily high during times of peak demand (for instance, during a weather event). In short, EPA admits its cost analysis relies on assumptions (the availability of gas on a firm basis) that are unsupported in the record ("gas can be adequately supplied through spot purchase arrangements"). CI8914 (RTC Ch. 6 at 10). The Rule is thus arbitrary and capricious.

EPA insists that these are just "disagree[ments] with EPA's conclusions," and that its conclusions are reasonable. Resp. 114. But without analyzing the spot market's cost and its effect on coal plants' ability to provide a dependable supply of electricity without a firm supply, EPA cannot "reasonably" conclude that the spot market is adequate on the record here—particularly when commenters detailed why firm access is necessary. *See Home Box Office, Inc. v. FCC*, 567 F.2d 9, 35 (D.C. Cir. 1977) (explaining that a court "must ensure [an agency] has adequately considered all relevant factors").

The inadequacy of EPA's analysis does not end there. EPA looked only at how far plants are from a natural gas pipeline, without considering other crucial facts that would affect access, such as whether those nearby pipelines have the capacity to provide a firm supply to the plant. *See* Br. 120-21. Commenters provided examples, including a North Dakota plant, where the nearest pipeline could not provide adequate supply. CI0710 (PGen Comments, Att. K 7). EPA characterizes this substantive issue as a "quibble" with EPA's analysis of a single plant. Resp. 114. But that misses the point: The North Dakota plant is just one example of how EPA's analysis is deficient. EPA demonstrates its continuing failure to understand this point when it says again that "most" plants are within 30 miles of a pipeline. Resp. 115; *see also* State Int. 17. But the problem is *not* how far plants are from pipelines; the problem is that EPA failed to look at the available firm-supply capacity of those pipelines. EPA thus has not only failed to respond to comments, but "to consider an important aspect of the problem" as well. *State Farm*, 463 U.S. at 43.

D. EPA's timeline for necessary pipeline construction is unrealistic and flawed.

The emission limit based on 40% co-firing is unachievable because the timeline for constructing the required gas pipeline infrastructure is unrealistic. Br. 121-25. Remarkably, EPA provides no response at all. As that silence tacitly concedes, it was arbitrary and capricious for EPA not "to consider an important aspect of the problem" and assess the time it would take for *all* facilities to obtain natural gas access. *State Farm*, 463 U.S. at 43.

E. The 40% co-firing BSER is not cost-effective because of the need to construct pipeline infrastructure.

EPA failed to adequately consider the 40% co-firing BSER's cost, as required by Section 7411(a)(1). Standards based on 40% natural gas co-firing would, EPA admits, require the construction of thousands of miles of pipelines and cost billions of dollars. CI8244 (89 Fed. Reg. at 39,893). EPA's cost assessment was based on substantial flaws, like its assumption that nearby pipelines would have the capacity to deliver adequate firm supply and that only shorter "lateral" or connecting lines would be needed. *See* Br. 125-28.

EPA asserts that it did assess the costs for each facility. Resp. 117. But EPA based that assessment on two faulty assumptions: (1) it evaluated cost based on firm access, even though its consultant says sufficient gas will be available only on the spot market; and (2) it assumed most facilities would need to build only short, "lateral" pipelines. Neither is correct. *See supra* pp. 26-28, 55-55.

EPA again asserts that States would have flexibility to account for site-specific costs. Resp. 116. But EPA cannot save an arbitrary BSER conclusion by arguing that regulated parties may be able to get dispensation from its arbitrary requirements. Regardless, EPA has stated it would reject any efforts to mitigate costs unless they are "fundamentally different" from EPA's assumptions, narrowing its purported flexibility to the vanishing point. *See* Br. 127-28 (citing CI8244 (89 Fed. Reg. at 39,894)).

In short, the Rule's alternative 40% gas co-firing BSER both calls for impermissible generation shifting, *West Virginia*, 597 U.S. at 734-35, and is neither achievable nor cost-effective in violation of Section 7411(a)(1). The Rule should be vacated.

III. The Rule tackles a major question without clear congressional authorization.

This case "is a major questions case." *West Virginia*, 597 U.S. at 724. Allowing the Rule to stand would represent "a transformative expansion in [EPA's] regulatory authority," empowering it to dictate the Nation's overall mix of electricity generation by setting standards that disfavored sources cannot meet. *Id.* (cleaned up). But Congress did not task EPA with deciding "how much coal-based generation there should be over the coming decades"; instead, the "basic and consequential tradeoffs involved in such a choice are ones that Congress would likely have intended for itself." *Id.* at 729-30. And that analysis does not change just because EPA now asserts the power to decide those fundamental questions indirectly rather than directly.

a. EPA insists that the Rule cannot present a major question because its standards are purportedly based on a "technological system[]" "applied at" "individual plant[s]" rather than a "grid-level approach." But that ignores how the Rule dramatically transforms the Nation's electricity generation. The major-questions doctrine is not an "on-off switch," *Biden v. Nebraska*, 143 S. Ct. 2355, 2384 (2023) (Barrett, J., concurring), that an agency can switch off by clothing its transformative

actions in traditional garb. Instead, that doctrine requires a practical, pragmatic inquiry into whether Congress was "likely to delegate a policy decision of" the "economic and political magnitude" at issue to an administrative agency. *FDA v. Brown & Williamson Tobacco Corp.*, 529 U.S. 120, 133 (2000). Here, the answer is straightforward: EPA's charge is to regulate existing facilities, not to push the energy sector away from coal to make it easier for EPA to achieve its environmental goals. Because the Rule does the latter, it raises a major question.

EPA insists the Rule evades major-questions scrutiny because the BSER is focused on individual sources, but that argument fails even on its own terms. *Contra* Resp. 118-19. The Rule requires many measures that go beyond individual sources, such as pipelines, sequestration, and more. *See* Br. for Fed. Resps. at 24-25, *West Virginia v. EPA*, 597 U.S. 697 (2022) (No. 20-1530), 2022 WL 216161, at *24 ("*West Virginia* Resp.") (describing how elements of CCS occur off-site). And the Rule interprets the phrase "has been adequately demonstrated" so capaciously as to encompass something never been done before. Br. 130. More broadly, the BSER's effects are not limited to technological mitigation of emissions from individual sources; instead, it would "radical[ly]" and

"fundamental[ly]" transform both those sources and the broader American energy market. *MCI Telecomm. Corp. v. AT&T Co.*, 512 U.S. 218, 229 (1994).

EPA misunderstands how the major-questions doctrine assesses the political and economic significance of the power that the agency is claiming. A court must consider the potential *effects* of the authority that the agency is asserting, not just the means. Any drill sergeant can order his recruits to jog 15 paces, but one who asserts the authority to replace them with 15 new recruits—or to march them off a cliff—is claiming an extraordinarily different authority. So too here: even if the Rule's explicit commands make "no judgments" about coal's market share, a court cannot ignore the consequences of those commands in deciding whether EPA is exercising a power of great economic and political significance transforming the grid. *Contra* Resp. 119-20.

b. All the relevant factors confirm that the Rule's asserted authority to revolutionize the energy-generation industry implicates a major question.

Cost. Petitioners have never said cost alone proves a major question, *contra* Resp. 120—but it is relevant. *See, e.g.*, *Ala. Ass'n of*

Realtors v. DHHS, 594 U.S. 758, 764 (2021) (considering program's "billion[s]" in "economic impact"); *King v. Burwell*, 576 U.S. 473, 485 (2015) (same). EPA concedes the Rule will impose "significant" and "large" costs, in the billions of dollars. Resp. 120. Still, it maintains that Congress would have expected regulation under Section 7411 to be expensive. *See* Resp. 121. But while Congress might give an agency some statutory authority to tackle a large-scale problem, that does not imply that Congress authorized the agency to impose unlimited costs and transformative changes as its solution. After all, *King* and *Alabama Association of Realtors* likewise involved agency regulation of complicated and expensive problems (national insurance markets and a global pandemic), but the problems' scale did not render cost irrelevant in determining whether those actions implicated major questions.

In any event, EPA cannot shrug off crippling costs by claiming to know Congress's mind. The major-questions analysis traffics not in mentalism but in what Congress "clearly" said. *West Virginia*, 597 U.S. at 716. And while Section 7411 as a whole is a "main" EPA program, Resp. 121, subsection (d) is a "little-used backwater," *West Virginia*, 597 U.S. at 730. Lastly, EPA's argument that the Rule's costs are lower than

other EPA regulations uses bad accounting. Resp. 121. EPA underestimates the costs by ignoring those costs taxpayers bear. *See supra* pp. 31-36. EPA also uses cost per ton of CO_2—not the Rule's total price tag, which is how *King* and *Alabama Association of Realtors* understood "costs." Per-ton measures do not meaningfully measure overall economic "significance." *Brown & Williamson*, 529 U.S. at 160.

EPA claims the Court can ignore the costs—and even plant closures—the Rule impose, because EPA thinks these are "'incidental'" and "indirect" effects. Resp. 121-22; *see also* ENGO Br. 21. EPA made the same argument in *West Virginia* to no avail. *See West Virginia* Resp. at 45-46. And while *West Virginia* notes that rules that merely "may end up causing an incidental loss of coal's market share" do not raise the same concerns, 597 U.S. at 731 n.4, the Rule's effects on electricity generation here are anything but "incidental." *See*, *e.g.*, *Incidental*, *Black's Law Dictionary* (12th ed. 2024) ("having a minor role"); *Hartford Fire Ins. v. Orient Overseas Containers Lines (UK) Ltd.*, 230 F.3d 549, 555 (2d Cir. 2000) (not "great and substantial"); *Stevens v. United States*, 302 F.2d 158, 163 (5th Cir. 1962) (not "significant"); *contra* Resp. 122. The Rule

imposes pervasive, industry-wide, and nearly total costs and closures. That makes them anything but "incidental."

Political salience. Everyone agrees climate change has "staked a place at the very center of this Nation's public discourse." *Nat'l Rev., Inc. v. Mann*, 140 S. Ct. 344, 348 (2019) (Alito, J., dissenting from denial of certiorari). This administration counts climate-related issues as among the most politically significant. *See*, *e.g.*, 15 Exec. Order No. 13,990, *Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis*, 86 Fed. Reg. 7037 (Jan. 25, 2021). And CO_2 removal technologies like CCS remain "the most controversial" solutions. Fiona Harvey, *Carbon dioxide removal: the tech that is polarising climate science*, Guardian (Apr. 25, 2023, 9:53 AM), https://tinyurl.com/mrct433v; White House Environmental Justice Advisory Council Carbon Management Workgroup, *White House Environmental Justice Advisory Council Recommendations: Carbon Management Workgroup* 15 (Nov. 17, 2023), https://tinyurl.com/3u2w63h8 (urging administration to abandon CCS because of "insufficient scientific evidence regarding" its "effectiveness"). This "earnest and profound debate" over climate change and the methods to address, and over CCS in particular, confirms that

the Rule is the kind of politically significant action that triggers the major-questions doctrine. *Gonzales v. Oregon*, 546 U.S. 243, 249 (2006); *see Util. Air Regul. Grp. v. EPA*, 573 U.S. 302, 324 (2014).

EPA has no meaningful response. Its only answer is to quibble that certain bills that Petitioners cited to show that Congress has declined to mandate CCS are irrelevant because they do not specifically address "CCS at power plants." Resp. 124. That is irrelevant. That Congress has debated and chosen not to mandate CCS underscores that the issues here are politically salient, even if those bills addressed CCS in other sectors. If anything, recent legislation like the IRA shows that Congress wants to *incentivize* CCS, not mandate it. *Contra* Resp. 124. And using public funds in the IRA to stimulate CCS development confirms the technology is not widely implementable at scale today.

Transformative scope. EPA is trying to rejigger an essential industry under the guise of "technology-based" standards. Setting unachievable CCS-based standards effectively requires coal plants to cease operations by 2032 or become 40% gas plants and close by 2039. Congress nowhere allowed EPA to "forc[e] coal plants to 'shift' away virtually all of their generation—*i.e.*, to cease making power

altogether"—no matter the mechanism. *West Virginia*, 597 U.S. at 728. And that transformative shift affects every American—an extraordinary "encroachment." *NFIB v. OSHA*, 595 U.S. 109, 117 (2022).

EPA tries to distract from this breathtaking scope by invoking a "presumption of regularity." Resp. 124-25. But the Court is not "required to exhibit a naiveté from which ordinary citizens are free." *Dep't of Com. v. New York*, 588 U.S. 752, 785 (2019) (cleaned up). EPA's BSER will eliminate "most" coal generation, including all non-CCS coal generation, by 2035 and cause a net 32 GW loss of coal generation that same year. Br. 134. And while EPA claims only 7% net coal loss, Resp. 122, that number relies on both inaccurately aggressive retirement predictions, Br. 107-10, and an unexplained hope that the few remaining coal plants in 2040 will "generate at much higher capacity" than they do now. *See* CI8914 (RTC Chap. 2 at 42). The Court need not accept assertions of minimal disruption so "incongruent with" the record. *Dep't of Com.*, 588 U.S. at 785.

For the same reasons, the Rule's "degree of stringency" is relevant, too. *Contra* Resp. 123. Congress designed Section 7411(d) to help plants "operate more cleanly," not to force them to close. Resp. 118-19 (quoting

West Virginia, 597 U.S. at 706). Shuttering plants is not operating them. *West Virginia*, 597 U.S. at 728 n.3. The Rule's "economic dragooning" and forced "acquiesce[nce]" underscores that it exercises an authority that Congress never afforded EPA. *NFIB v. Sebelius*, 567 U.S. 519, 582 (2012).

The Rule also involves balancing competing considerations that fall well outside EPA's expertise. EPA may have expertise estimating how pollution controls harm energy production, but that expertise stops at the fenceline. *Compare West Virginia*, 597 U.S. at 729 (EPA lacks expertise in "electricity transmission, distribution, and storage"), *with* Resp. 123 (claiming broad expertise). EPA's aggressive foray into wider grid management is thus "novel," again undermining its claim of authority. *West Virginia*, 597 U.S. at 716. Although some EPA rules require relatively minor off-site work, Resp. 123—none implicate anything like the massive transportation and storage work that CCS requires, all of which occurs off-site. EPA offers no example where off-site work constitutes such a significant part of compliance—and thus implicates activities far afield from EPA's expertise.

The Rule presents a major question in every sense. EPA's failure to find any clear congressional authorization for its extraordinary rule is fatal.

IV. The Rule hamstrings the States.

The Rule also impairs the discretion Congress gave the States. Congress chooses how to balance competing interests to achieve its policy goals. *Rodriguez v. United States*, 480 U.S. 522, 526 (1987). In Section 7411, Congress balanced the need for federal regulation with the need to respect State authority by allowing "States [to] set the actual rules" for existing sources. *West Virginia*, 597 U.S. at 710. The Rule undoes all that. *See* Br. 135-50.

Rather than defend the Rule's intrusion on States' discretion, EPA dodges the issue. It claims any disagreement with the new restrictions on the States' use of RULOF should be addressed in challenges to the separately promulgated implementing regulations. Resp. 126. But EPA cannot evade scrutiny by disclaiming its own action. The implementing regulations "apply to all Section 7411(d) emission guidelines," including this one. *Id.* Yet the agency never explains why it can make the same legal error twice but answer for it only once. EPA embedded the unlawful

"fundamental differences" standard into the Rule. And starting from that unlawful base rendered the Rule unlawful, too. CI8244 (89 Fed. Reg. at 39,962). That the "fundamental difference" standard might also render another agency action unlawful is beside the point.

In any event, the Rule aggravates the problems with the "fundamental difference" standard. Congress set out a cooperative-federalism approach in which EPA identifies the BSER, States establish "standards of performance" for existing sources (based on the BSER and source-specific considerations), and States ""implement[] and enforce[]" those standards. § 7411(d)(1). So while EPA has authority to set some initial benchmarks and targets, the States also retain tremendous leeway, consistent with their circumstances and priorities, in meeting those benchmarks and targets. Indeed, Congress mandated that EPA "shall permit" the States to exercise that discretion. *Id.*

EPA insists "[t]he Rule maintains States' ability to set existing-source standards and to consider source-specific factors when doing so." Resp. 125; *see also* State Intervenors' Br. 24. But that runs headlong into what the Rule says: Source-specific standards "must differ as little as possible from the presumptive standard of performance." CI8244 (89 Fed.

Reg. at 39,964). In issuing this command, EPA conflates three distinct concepts: (1) the BSER (which EPA determines), § 7411(a)(1); (2) the degree of emission limitation achievable by that BSER, *id.;* and (3) the standard of performance (which States set and EPA must approve if "satisfactory"), § 7411(d)(1)-(2). EPA's role in identifying the first item and calculating the second does not give it control over the third. "Once the EPA identifies a [BSER] . . . and calculates the degree of emission limitation it allows, the Clean Air Act leaves it to the States to set their own standards of performance for their existing pollution sources." *Am. Lung Ass'n v. EPA*, 985 F.3d 914, 962 (D.C. Cir. 2021) (citing § 7411(d)), *rev'd on other grounds West Virginia v. EPA*, 597 U.S. 697 (2022). And the Clean Air Act "expressly" "gives the States broad discretion" in setting those standards. *Id.*

EPA further attacks the States' statutorily conferred discretion by arguing Section 7411 "does not confer unbounded discretion on States to consider source-specific factors." Resp. 127; *see also* State Intervenors' Br. 20-21. True. But the Rule eliminates the States' discretion by imposing presumptive standards that leave next to no room for source-specific adjustment, requiring "fundamental differences" before States may vary.

CI8244 (89 Fed. Reg. at 39,962). Choking off state discretion at the start is much different from a simple back-end check that State plans are "satisfactory." § 7411(d)(2)(A). To respect Congress's intent, EPA "cannot consign States to the ministerial tasks of information gathering and making initial recommendations, while reserving to [itself] the authority to make final judgments under the guise of surveillance and oversight." *Alaska Dep't of Env't Conservation v. EPA*, 540 U.S. 461, 518 (2004) (Kennedy, J., dissenting).

EPA still insists States can use other options because the "Rule does not require States to use [EPA's] methodology" or limit their "ability to set less stringent standards." Resp. 128. But these empty assurances ignore the Rule's practical effect of forcing States to make a special showing beyond what Section 7411(d) requires. The Rule allows States to exercise their statutory rights to consider RULOF—and depart from the Rule's "presumptive standards"—only after satisfying specific, heightened requirements the Rule prescribes. *See* CI8244 (89 Fed. Reg at 39,966). Yet Section 7411(d) explicitly empowers States, when setting performance standards for an existing source, to "take into consideration"—*without any limitation*—RULOF. § 7411(d)(1).

EPA does not cite any support for its supposed authority to require States to justify any deviation from EPA's preferences in their performance standards—because it cannot. This Court has already rejected similar attempts by EPA to "simply throw[] the burden of persuasion onto the states." *Michigan v. EPA*, 213 F.3d 663, 683 (D.C. Cir. 2000). EPA does not explain what justifies a different approach here.

And any discretion the Rule still offers the States is erased by how the Rule treats remaining useful life. Again: EPA says that States must show a "fundamental difference[]" between what "EPA considered" and "the information specific to a facility" when a State seeks to deviate from the Rule's presumptive standards. CI8244 (89 Fed. Reg. at 39,964). EPA maintains that it considered the remaining useful life in its presumptive standards, and even created subcategories based on facility life, effectively eliminating States' ability to point to remaining useful life as a fundamental difference not considered by EPA. *See* CI8244 (*Id.* at 39,841). EPA promises States "remain free to further consider the remaining useful life of any particular source," Resp. 129 (cleaned up), but EPA has already brushed aside evidence that 90% CCS is unreasonably costly as well as technically and physically impossible, *see* Br. 24-110. That reality,

coupled with EPA's decision to require States to adopt EPA's preferred "factors and evaluation metrics" in exercising their discretion, *see* CI8244 (89 Fed. Reg. at 39,962), means States will find it next to impossible to deviate from the Rule. And while State Intervenors argue that RULOF only allows States to make the standard of performance stricter, State Intervenors' Br. 20, that is not the best reading of the statute because it renders RULOF pointless surplusage.

EPA waves these concerns away, saying they are "a premature challenge to a hypothetical future state-plan disapproval." Resp. 128. But the Rule infringes States' statutory and sovereign authority *today*. It limits States' ability to deviate from the presumptive standards, which in turn changes how States design their plans. Because the Rule compels States to rebut its "presumptive standards," *see* Br. 141-48, these standards dictate how the States must develop their plans for EPA review.

Making matters worse, EPA has not provided any guidance on the source-specific circumstances that might justify deviating from EPA's standards. EPA declined commenters' requests to identify situations where deviation would be appropriate to "reduce the regulatory burden

on states developing and submitting plans." CI8244 (89 Fed. Reg. at 39,964). Rather than trying to help the States ensure their plans are satisfactory, EPA has left them in the dark, playing an unwinnable guessing game about what EPA might later consider "satisfactory" in a state plan.

Finally, the federalism canon confirms the Rule goes too far in an area traditionally left to the States. The States' authority does not disappear just because the Rule "does not [expressly] dictate what electricity sources may operate in a State." Resp. 129. Were that true, an agency could erase a traditional state interest so long as it dressed up an unlawful action as one serving a traditional federal interest. Even if EPA labeled the Rule "pollution control," it is also energy regulation, affecting a core area of traditional state interest. *See West Virginia*, 597 U.S. at 746 (Gorsuch, J., concurring) (noting the Clean Power Plan "unquestionably ha[d] an impact on federalism" by regulating energy). And here again, nothing in Section 7411 permits EPA to blind itself to the Rule's practical effects, particularly when Congress went out of its way to reinforce the States' role in setting performance standards.

V. The Act does not authorize EPA to subcategorize by retirement date.

1. EPA exceeded its authority by subcategorizing existing coal-fired power plants by retirement date. While Congress empowered EPA to subcategorize new sources in setting performance standards, §7411(b)(2), EPA's attempt to apply that authority to existing sources under Section 7411(d) is unlawful because (a) subcategorization by retirement essentially defines "performance standards" based on *non*-performance, (b) retirement date is not a "class" of "sources," and (c) subcategorizing by retirement date usurps States' authority to set performance standards by considering an existing facility's RULOF.

2. EPA's defense of its subcategorization scheme depends on a misreading of the Act.

First, EPA advances an expansive reading of "class" that would leave the word entirely meaningless. EPA insists "class" could mean "retirement date" because "[t]he word 'class' is capacious—encompassing any category of things having some property or attribute in common." Resp. 132. But EPA cites no basis for so broad a reading, and it provides no support for asserting retirement dates constitute a classifiable source "property" or "attribute." *Id.* But a retirement date is an owner's business

decision, and the Act clearly defines "sources" and "owners" separately. §7411(a). When an "owner" retires a "source," that decision is not based on the source's "class[], type[], or size[]," but rather the owner's determination that the costs of continued operation (including regulatory compliance costs) will exceed revenues. EPA does not, and cannot, identify any provision authorizing subcategorization by economic viability.

Second, EPA insists that sources "mak[e] [their] own decision[s] to retire by a certain date," Resp. 132, but fails to acknowledge that the Rule's retirement subcategory effectively makes that decision for the owners of most plants. In fact, the Rule forces many sources to retire because the only "alternative" is impossible. *Supra* pp. 3-31.

Third, EPA incorrectly asserts that the Rule's subcategories do not usurp States' Section 7411(d) authority because "State[s] remain[] free to particularize a standard of performance to the circumstances of a particular plant." Resp. 133. EPA reads the Act exactly backward. Section 7411 gives States, not EPA, the authority to set performance standards for existing sources, and it is in that standard-setting process

where "the remaining useful life of the existing source" is considered, not before. §7411(d).

In fact, the Act makes clear that subcategorization is done only "for the purpose of establishing ... standards" for "*new* sources." §7411(b)(2) (emphasis added). For *existing* sources, EPA may only set the BSER and degree of emission limitation achievable. Resp. 6. For these sources, Section 7411(d) makes subcategorization unnecessary because it authorizes States to consider RULOF when *they* set site-specific standards as needed. *Id.* EPA may not subcategorize based on what States alone can consider in setting the standards for existing sources.

3. Unlike EPA, Edison Electric Institute ("EEI") does not try to obscure the obvious, conceding that the Rule subcategorizes sources "based on their remaining useful life." EEI Br. 1. This confirms the unlawfulness of EPA's rule. *See* EEI Br. 5. By defining the BSER through subcategories based on remaining useful life—which is a determination *States* have the right to make, *see* §7411(d) —EPA unlawfully takes for itself the States' statutory role.

EEI leans on EPA's backstop authority to set existing source standards only *if* and *after* a State first fails to submit an approval plan.

EEI Br. 6. But EPA cannot seize this power to consider remaining useful life now, via subcategorization, long before States have had their first opportunity to use the authority Congress gave them to do so. And while EEI tries to construe this practice as "longstanding," EEI Br. 1, 3, 4, the only example EEI identifies of EPA subcategorizing sources based on remaining useful life is from a rule adopted under an entirely different statute, the Federal Water Pollution Control Act, EEI Br. 8-9.

VI. EPA did not meaningfully address coal-refuse facilities' comments.

EPA's assertion that it "*did* address" coal-refuse comments, Resp. 138 (emphasis in original), is not supported by the record. EPA failed to respond to comments regarding the need to place coal-refuse facilities in their own subcategory or for EPA to justify the Rule's application to those facilities. *Compare* Resp. 138-39 *with* CI8244 (89 Fed. Reg. at 39,842, 39,854, and 39,886). Only one of these cited pages makes even a passing reference to coal-refuse facilities, and the remainder say nothing at all, particularly about the need for subcategorization.

Although EPA does discuss small coal plants, *see* CI8244 (89 Fed. Reg. at 39,842, 39,886), coal-refuse facilities are not small coal plants. They operate in a fundamentally different manner. *See, e.g.*, CI0708

(ARIPPA Comments 1-2, 19). EPA also discusses the CO_2 content of various coal types and how that might affect capture, *see* CI8244 (89 Fed. Reg. at 39,854), but that has nothing to do with the issues raised by coal-refuse facilities.

EPA separately attempts to support its contention that 90% CCS is cost justified for coal-refuse facilities. Resp. 141 (citing CI8244 (89 Fed. Reg. at 39,879-83, 39,932-35, and 39,894-95)). Again, none of these pages mention coal-refuse facilities. In short, there is nothing in the record that responds to the comments raised by coal-refuse facilities and the need to treat them separately.

It gets worse. EPA responds to Petitioners' argument that gas co-firing is undemonstrated for coal-refuse facilities by claiming it made clear that coal-refuse plants using circulating fluidized bed boilers can co-fire natural gas. Resp. 138. But EPA's only support is a conclusory sentence that one facility had "historically fired natural gas at high levels." Resp. 139 (citing CI8914 (RTC Chap. 6 at 5)). EPA nowhere explains what "historically fired" means or provides any reference in the record to any other coal-refuse facilities.

EPA also side-steps Petitioners' argument that PURPA prevents coal-refuse facilities from using 40% co-firing by describing PURPA as providing only "benefits," and not requirements. Resp. 140. But PURPA is the entire reason coal-refuse facilities exist. CI0708 (ARIPPA Comments 17) (the "coal refuse EGU industry" is "an outgrowth of the PURPA."). Under PURPA, FERC limited coal-refuse facilities to those that obtain 75% of their heat input from coal-refuse. *Id.* Meeting the Rule's 40% co-firing standard would make it impossible for a coal-refuse facility to meet that 75% threshold.

EPA has recognized the need to subcategorize coal-refuse in other rules. For instance, EPA's mercury rule under Section 7411 creates a subcategory for coal-refuse facilities that burn 75% or more eastern bituminous coal-refuse. *See* 40 C.F.R. § 63.10042. EPA's failure to address subcategorization at all in this Rule is a flaw that alone justifies vacatur.

EPA asks the Court to dismiss Petitioners' concerns by suggesting States may be able to supply an alternative in their plans. Resp. 140. But that only underscores the problem: EPA has not sufficiently justified the inclusion of the coal-refuse industry in this Rule, has not addressed the

significant comments regarding the Rule's applicability to coal-refuse, and is trying to foist that responsibility onto the States.

Finally, EPA suggests that any failure regarding its consideration of coal-refuse facilities should be deemed a harmless procedural error. Resp. 142. Not so. Failure to consider issues such as these is an independent ground for vacatur. *See Ohio*, 144 S. Ct. at 2053.

CONCLUSION

The Court should vacate the Rule.

Dated: October 25, 2024

Respectfully submitted,

/s/ *James A. Barta*
Theodore E. Rokita
Attorney General
James A. Barta
Solicitor General

OFFICE OF THE ATTORNEY GENERAL OF INDIANA
302 W. Washington St.
Indianapolis, IN 46204
(317) 232-0709

Counsel for Petitioner State of Indiana

/s/ *Michael R. Williams*
Patrick Morrisey
Attorney General
Michael R. Williams
Solicitor General

OFFICE OF THE WEST VIRGINIA ATTORNEY GENERAL
1900 Kanawha Blvd. E
State Capitol Building 1, Rm. 26-E
Charleston, WV 25305
(304) 558-2021

Counsel for Petitioner State of West Virginia

/s/ *Allison D. Wood*
Allison D. Wood
Makram B. Jaber
Aaron M. Flynn
MCGUIREWOODS LLP
888 16th Street, NW, Suite 500
Black Lives Matter Plaza
Washington, DC 20006
(202) 857-2420

Paul D. Clement
C. Harker Rhodes IV
CLEMENT & MURPHY, PLLC
706 Duke Street
Alexandria, VA 22314
(202) 742-8900

Counsel for Petitioner Electric Generators for a Sensible Transition

/s/ *Edmund G. LaCour Jr.*
Steve Marshall
Attorney General
Edmund G. LaCour Jr.
Solicitor General

OFFICE OF THE ATTORNEY GENERAL STATE OF ALABAMA
501 Washington Ave.
P.O. Box 300152
Montgomery, AL 36130-0152
(334) 242-7300

Counsel for Petitioner State of Alabama

/s/ *Michael B. Schon*
Scott A. Keller
Steven P. Lehotsky
Michael B. Schon
Joshua P. Morrow
Jacob B. Richards
LEHOTSKY KELLER COHN LLP
200 Massachusetts Ave., NW
Suite 700
Washington, DC 20001
(512) 693-8350

Mithun Mansinghani
LEHOTSKY KELLER COHN LLP
629 W. Main St.
Oklahoma City, OK 73102

Counsel for Petitioner National Rural Electric Cooperative Association

/s/ *Garrison Todd*
Treg Taylor
Attorney General
Garrison Todd
Assistant Attorney General

ALASKA DEPARTMENT OF LAW
1031 W. 4th Ave., Suite 200
Anchorage, AK 99501
(907) 269-5100

Counsel for Petitioner State of Alaska

/s/ *Thomas A. Lorenzen*
Thomas A. Lorenzen
Amanda Shafer Berman
Elizabeth B. Dawson
CROWELL & MORING LLP
1001 Pennsylvania Ave., NW
Washington, DC 20004
(202) 624-2500

Counsel for Petitioner Edison Electric Institute

/s/ *Nicholas J. Bronni*
Tim Griffin
Attorney General
Nicholas J. Bronni
Solicitor General
Dylan Jacobs
Deputy Solicitor General

OFFICE OF THE ARKANSAS ATTORNEY GENERAL
323 Center Street, Suite 200
Little Rock, AR 72201
(501) 682-2007

Counsel for Petitioner State of Arkansas

/s/ *Megan H. Berge*
Megan H. Berge
BAKER BOTTS L.L.P.
700 K Street, NW
Washington, DC 20001
(415) 291-6233
(202) 639-7733

J. Mark Little
BAKER BOTTS L.L.P.
910 Louisiana Street
Houston, TX 77002
(713) 229-1489

Counsel for Petitioners Idaho Power Company; Oklahoma Gas and Electric Company; Montana-Dakota Utilities Co.; and Rainbow Energy Center, LLC

/s/ *Henry C. Whitaker*
Ashley Moody
Attorney General
Henry C. Whitaker
Solicitor General
James H. Percival
Chief of Staff

OFFICE OF THE ATTORNEY GENERAL
The Capital, Pl-01
Tallahassee, FL 32399-1050
(850) 414-3300

Counsel for Petitioner State of Florida

/s/ *David M. Flannery*
David M. Flannery
Kathy G. Beckett
Keeleigh S. Huffman
STEPTOE & JOHNSON PLLC
707 Virginia Street, East
P.O. Box 1588
Charleston, WV 25326
(304) 353-8000

Edward L. Kropp
STEPTOE & JOHNSON PLLC
P.O. Box 36425
Indianapolis, IN 46236
(317) 946-9882

Counsel for Petitioners Midwest Ozone Group and Appalachian Region Independent Power Producers

/s/ *Stephen J. Petrany*
Christopher M. Carr
Attorney General
Stephen J. Petrany
Solicitor General

OFFICE OF THE ATTORNEY GENERAL OF GEORGIA
40 Capital Square, SW
Atlanta, GA 30334
(404) 458-3408

Counsel for Petitioner State of Georgia

/s/ *Misha Tseytlin*
Misha Tseytlin
TROUTMAN PEPPER HAMILTON SANDERS LLP
227 W. Monroe Street, Suite 3900
Chicago, IL 60606
(608) 999-1240

Carroll Wade McGuffey III
Melissa Horne
TROUTMAN PEPPER HAMILTON SANDERS LLP
600 Peachtree St. N.E.
Suite 3000
Atlanta, GA 30308
(404) 885-3698

Counsel for Petitioners National Mining Association and America's Power

/s/ *Alan M. Hurst*
Raúl R. Labrador
Attorney General
Alan M. Hurst
Solicitor General

OFFICE OF THE IDAHO ATTORNEY GENERAL
P.O. Box 83720
Boise, ID 83720-0010
(208) 334-2400

Counsel for Petitioner State of Idaho

/s/ *Eugene M. Trisko*
Eugene M. Trisko
Law Offices of Eugene M. Trisko
P.O. Box 330133
Atlantic Beach, FL 32233
(301) 639-5238

Counsel for Petitioners United Mine Workers of America, AFL-CIO; International Brotherhood of Electrical Workers, AFL-CIO; and International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers, AFL-CIO

/s/ *Anthony J. Powell*
Kris W. Kobach
Attorney General
Anthony J. Powell
Solicitor General

OFFICE OF THE KANSAS ATTORNEY GENERAL
120 SW 10th Avenue, 2nd Floor
Topeka, KS 66612
(785) 368-8539

Counsel for Petitioner State of Kansas

/s/ *Charles T. Wehland*
Charles T. Wehland
JONES DAY
110 North Wacker Drive
Suite 4800
Chicago, IL 60601-1692
(312) 269-4388

Yaakov Roth
Brinton Lucas
S. Matthew Krsacok
JONES DAY
51 Louisiana Avenue, NW
Washington, DC 20001
(202) 879-7658

Jeffery D. Ubersax
KUSHNER & HAMED CO., LPA
1375 East Ninth Street
Suite 1390
Cleveland, OH 44114
(216) 696-6700

Counsel for Petitioner NACCO Natural Resources Corporation

/s/ *Eric H. Wessan*
Brenna Bird
Attorney General
Eric H. Wessan
Solicitor General

OFFICE OF THE ATTORNEY GENERAL OF IOWA
1305 E. Walnut Street
Des Moines, IA 50319
(515) 823-9117

Counsel for Petitioner State of Iowa

/s/ *Mark W. DeLaquil*
Martin T. Booher
Joshua T. Wilson
Baker & Hostetler LLP
2000 Key Tower
127 Public Square
Cleveland, OH 44114

Mark W. DeLaquil
Baker & Hostetler LLP
1050 Connecticut Ave., NW
Suite 1100
Washington, DC 20036
(202) 861-1527

Counsel for Petitioners, Westmoreland Mining Holdings LLC; Westmoreland Mining LLC; and Westmoreland Rosebud Mining LLC

/s/ *Matthew F. Kuhn*
Russell Coleman
Attorney General
Matthew F. Kuhn
Solicitor General
Jacob M. Abrahamson
Counsel for Special Litigation

OFFICE OF THE KENTUCKY ATTORNEY GENERAL
700 Capital Avenue, Suite 118
Frankfort, KY 40601
(502) 696-5300

Counsel for Petitioner Commonwealth of Kentucky

/s/ *J. Benjamin Aguiñaga*
Liz Murrill
Attorney General
J. Benjamin Aguiñaga
Solicitor General
Tracy Short
Assistant Attorney General

LOUISIANA DEPARTMENT OF JUSTICE
1885 N. Third Street
Baton Rouge, LA 70804
(225) 326-6766

Counsel for Petitioner State of Louisiana

/s/ *Justin L. Matheny*
Lynn Fitch
Attorney General
Justin L. Matheny
Deputy Solicitor General

OFFICE OF THE MISSISSIPPI ATTORNEY GENERAL
P.O. Box 220
Jackson, MS 39205-0220
(601) 359-3825

Counsel for Petitioner State of Mississippi

/s/ *Joshua M. Divine*
Andrew Bailey
Attorney General
Joshua M. Divine
Solicitor General

MISSOURI ATTORNEY GENERAL'S OFFICE
P.O. Box 899
Jefferson City, MO 65102
(573) 751-1800

Counsel for Petitioner State of Missouri

/s/ *Christian B. Corrigan*
Austin Knudsen
Attorney General
Christian B. Corrigan
Solicitor General
Peter M. Torstensen, Jr.
Deputy Solicitor General

MONTANA DEPARTMENT OF JUSTICE
215 North Sanders
P.O. Box 201401
Helena, MT 59620-1401
(406) 444-2026

Counsel for Petitioner State of Montana

/s/ *Zachary A. Viglianco*
Michael T. Hilgers
Attorney General
Zachary A. Viglianco
Deputy Solicitor General

OFFICE OF THE ATTORNEY GENERAL OF NEBRASKA
2115 State Capitol
Lincoln, NE 68509
(531) 739-7645

Counsel for Petitioner State of Nebraska

/s/ *Mark W. Dell'Orfano*
John Formella
Attorney General
Mark W. Dell'Orfano
Assistant Attorney General

NEW HAMPSHIRE DEPARTMENT OF JUSTICE
33 Capitol Street
Concord, NH 03301
(603) 271-3643

Counsel for Petitioner State of New Hampshire

/s/ *Philip Axt*
Drew H. Wrigley
Attorney General
Philip Axt
Solicitor General

OFFICE OF ATTORNEY GENERAL OF NORTH DAKOTA
600 E. Boulevard Ave., Dept. 125
Bismarck, ND 58505
(701) 328-2210

Counsel for Petitioner State of North Dakota

/s/ *T. Elliot Gaiser*
Dave Yost
Attorney General
T. Elliott Gaiser
Solicitor General
Mathura J. Sridharan
Zachery P. Keller
Deputy Solicitors General
John K. McManus
Assistant Attorney General

OHIO ATTORNEY GENERAL'S OFFICE
30 East Broad St., 17th Floor
Columbus, OH 43215
(614) 466-8980

Counsel for Petitioner State of Ohio

/s/ *Garry M. Gaskins, II*
Gentner Drummond
Attorney General
Garry M. Gaskins, II
Solicitor General
Jennifer L. Lewis
Deputy Attorney General

OFFICE OF THE ATTORNEY GENERAL OF OKLAHOMA
313 NE Twenty-First St.
Oklahoma City, OK 73105
(405) 521-3921

Counsel for Petitioner State of Oklahoma

/s/ *J. Emory Smith, Jr.*
Alan Wilson
Attorney General
Robert D. Cook
Solicitor General
J. Emory Smith, Jr.
Deputy Solicitor General
Thomas T. Hydrick
Joseph D. Spate
Assistant Deputy Solicitors General

OFFICE OF THE ATTORNEY GENERAL OF SOUTH CAROLINA
1000 Assembly Street
Columbia, SC 29201
(803) 734-3371

Counsel for Petitioner State of South Carolina

/s/ *Steven Blair*
Marty J. Jackley
Attorney General
Steven Blair
Deputy Attorney General

SOUTH DAKOTA ATTORNEY GENERAL'S OFFICE
1302 E. Highway 14, Suite 1
Pierre, SD 57501
(605) 773-3215

Counsel for Petitioner State of South Dakota

/s/ *J. Matthew Rice*
Jonathan Skrmetti
Attorney General and Reporter
J. Matthew Rice
Solicitor General
Whitney Hermandorfer
Director of Strategic Litigation

OFFICE OF THE ATTORNEY GENERAL AND REPORTER OF TENNESSEE
P.O. Box 20207
Nashville, TN 37202-0207
(615) 741-7403

Counsel for Petitioner State of Tennessee

/s/ *Wesley S. Williams*
Ken Paxton
Attorney General
Brent Webster
First Assistant Attorney General
Ralph Molina
Deputy First Assistant Attorney General
James Lloyd
Deputy Attorney General for Civil Litigation
Kellie E. Billings-Ray
Chief, Environmental Protection Division
Wesley S. Williams
Ian Lancaster
Assistant Attorneys General

OFFICE OF THE ATTORNEY GENERAL OF TEXAS
ENVIRONMENTAL PROTECTION DIVISION
P.O. Box 12548, MC-066
Austin, TX 78711-2548
(512) 463-2012

Counsel for Petitioner State of Texas

/s/ *Stanford E. Purser*
Sean Reyes
Attorney General
Stanford E. Purser
Solicitor General

OFFICE OF THE UTAH ATTORNEY GENERAL
160 E. 300 S., 5th Floor
Salt Lake City, UT 84111
(385) 382-4334

Counsel for Petitioner State of Utah

/s/ *Erika L. Maley*
Jason Miyares
Attorney General
Erika L. Maley
Solicitor General
Kevin M. Gallagher
Principal Deputy Solicitor General
Brendan T. Chestnut
Deputy Solicitor General

VIRGINIA ATTORNEY GENERAL'S OFFICE
202 North 9th Street
Richmond, VA 23219
(804) 786-2071

Counsel for Petitioner Commonwealth of Virginia

/s/ *D. David DeWald*
Bridget Hill
Attorney General
D. David DeWald
Deputy Attorney General

OFFICE OF THE ATTORNEY GENERAL OF WYOMING
109 State Capitol
Cheyenne, WY 82002
(307) 777-7895

Counsel for Petitioner State of Wyoming

CERTIFICATE OF COMPLIANCE

This brief complies with the type-volume limit of the Court's order of August 9, 2024, ECF No. 2069206, because, excluding the parts of the document exempted by Fed. R. App. P. 32(f) and Circuit Rule 32(e)(1), this brief contains 15,537 words, which is within the 16,000-word allotment provided by the Court to Petitioners for their opening brief.

This brief complies with the typeface requirements of Fed. R. App. P. 32(a)(5) and the type-style requirements of Fed. R. App. P. 32(a)(6) because this brief has been prepared in a proportionally spaced typeface using Microsoft Word in 14-point Century Schoolbook font.

Dated: October 25, 2024

/s/ Michael R. Williams
Michael R. Williams